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ORIGINAL ARTICLES.

FURTHER OBSERVATIONS ON THE OPERATION OF EXCISION OF THE MEMBRANA TYMPANI AND OF THE OSSICLES IN NON- SUPPURATIVE (CATARRHAL) INFLAMMATION OF THE MIDDLE EAR.

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In our former papers† we, perhaps, did not dwell sufficiently, upon the subject of drainage but as we are dealing with the first form dry, non-suppurative, mainly, the great importance of drainage need not interest us so much as when we come to the suppurative from of middle-ear inflammation. We have never had a persistent discharge to follow our operations, but we have had it so stated where it occurred in the hands of others.

In advising this operation it is well to explain in detail how little may sometimes be gained. Yet how important that little of hearing may be, is shown by the entire relief from vertigo, prolonged pain and tinnitus, or by its sudden loss. Again where deafness is progressive, *i.e.*, to judge from cases already observed, the progress of chronic inflammation may cease after the mucous membrane of the drum undergoes dermic transformation.

We have been forced to the conclusion that on the removal of the drum head malleus and incus, sound enters the laby-

rinth through either or both windows, since we have witnessed great improvement from an opening made in the drum head without separation of the incus from the stapes. But no way is at present known of ascertaining beforehand absolutely, except those before given in our paper, whether fixation of the stapes exists in any given case.

The writer's experience in operating for the relief of subjective symptoms only is limited. It has been found, however, that where there existed vertigo and noises in the head, they have been alleviated or cured entirely by excision. Where very great relaxation of the transmitting mechanism exists, giving rise to severe autophonia, noises, vertigo, etc., the operation would seem to be indicated. As a rule it is probable that the earlier in life, as well as earlier in the disease itself, the operation is done the more successful it will be.

The author has found that the chorda tympani nerve is usually not disturbed by this operation, especially where it is possible remove the incus first. If, however, it happens to be drawn down into view a section of it may be removed, the result-

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†Vide MEDICAL AND SURGICAL REPORTER, current vol.

ing disturbance in taste being of short duration. Where the incus cannot readily be found, protracted search should be avoided, since its retention could not be productive of so much harm as are rude attempts at removal. Experience, moreover, shows that the removal of the incus is not absolutely necessary to a favorable result of the operation.

The parts should be carefully cleaned with absorbent (iodoform) cotton after the operation, or packed with iodoform gauze. There is but little if any pain experienced by the patient on coming out of the narcosis, and a drop or two of a 10 per cent. solution of cocaine is sometimes sufficient to allay any discomfort. Syringing is not advisable, as a rule. It is necessary to practice antiseptic precautions in this operation, as in all operations on the ear, either internal or external. In and about the ear the parts should be well washed with green antiseptic soap, after which with a solution of bichloride of mercury (1:2000), then with ether in which soap has been dissolved. The hands, and especially the nails, should receive close attention. All the instruments should be dipped in hot 1 per cent. solution of carbolic acid and soda before using. When operating this solution should be kept hot by a spirit lamp.

In five or six days, any tissues left partially detached during the operation and which has become necrotic, if not discharged, should be removed. The quantity is usually very small, consisting only of shreds of tissue. Chiselling away a portion of the sulcus tympanicus is quite unnecessary, indeed the procedure is, from the irritation caused, likely to favor reproductive action.

As result from exposure in very inclement weather decided suppuration may go on. This has to be promptly treated with equal parts of powdered anti febrin and boracic acid.

Extreme care should be taken in all cases to prevent suppuration, and irritation of the parts in any way prevented. Some cases need not be even wiped out, the slight discharge being allowed to become inspissated. Crusts are thus formed in the end of the canal and over the margin of the remaining rim of the drum head; the fundus gives the appearance of having been closed in by reproduction. On finally detaching these crusts, sometimes a large

opening will be found. After healing has taken place the mucous membrane undergoes dermoid transformation, its sensitive mucous surface having disappeared.

Dr. Sexton* found operation was more successful, as regards maintaining an opening in the drumhead, in persons of light build and in those who were not given to the use of stimulants or the consumption of a large amount of meat.

Referring to the recent work of Dench, in this operation, or any intra-tympanic operation, I find that he considers it always necessary to use a general anæsthetic except for the division of adhesions, and in his cases even where no discharge is present he advises a douche of a solution of bichloride of mercury 1—5000 several hours before operating.

We, usually, have operated on a couch, bed, or ordinary reclining chair, with the patient on the side, the head elevated on a pillow, while the operator seats himself on a level with the ear to be operated on. The anæsthetic is given in this position and the patient kept quiet, and disturbed as little as possible. Our author considers the position as a matter of no little importance, as effecting the result of the procedure. As the operative field is extremely limited, the surgeon should avail himself of every means in his power to have the head in such position that he can easily see all parts of the tympanic cavity and conduct his manipulations without the necessity of assuming an uncomfortable position. To this end he "now operates with the head and shoulders well elevated, the head being supported upon a rest which admits of motion in all directions. The patient is anæsthetized in the recumbent position and after thorough etherization is raised to the desired posture upon the German head-rest. Elevation of the head and shoulders also diminishes the hemorrhage, and the blood instead of flowing into the upper and posterior portion of the fundus of the canal in the region of the incudo-stapedial joint, is directed to the floor of the canal, and hence does not obscure that portion of the operative field which demands our closest attention."

"Straps passed under each arm prevent the body from falling downward during the operation." [I am always afraid of

* Report of the New York Ear and Eye Infirmary; also in his recent work on the ear.

this position in the use of general anesthetics.]

Some writers, notably Sexton, remove the incus before the malleus, and if the long process of the ossicle can be easily grasped after the incision of the membrana has been completed, there is no objection to this being done. Of late, however, Dench has stated that he has almost invariably extracted the malleus first (as we have here recommended,) and he finds the procedure less difficult than the other. If the incus has passed beyond the line of vision it can usually be brought into view by means of the incus hook. "These hooks are curved in opposite directions for the right and left ear, and are to be inserted into the handle in such a way that the hollow looks anteriorly; this hook is inserted into the posterior portion of the tympanum and being carried behind the ring, is then swept cautiously forward through the fornix, very little force being used. In executing this manipulation the hook should be kept in contact with the tympanic ring by gentle traction outward. In this manner it is usually possible to bring the long arm of the incus into view, presenting it close to the margin of the ring and being easily recognized; the difficulty in finding the incus frequently arises from the fact that we are inclined to search for it too high up, and too deeply in the cavity; the previous removal of the malleus usually loosens the attachments of the incus and allows the ossicles to fall somewhat backward and downward; it moreover, usually hugs the margin of the ring closely, and often at first seems to belong to this structure, but a touch with the probe or hook will push it further into view and reveal its true nature."

Our author is of the received opinion that it is better to avoid the removal of the bony ring, if possible, when the stapes is concealed behind the margin of the ring. If found rigid, incisions should be made around its base, then by gentle pressure with the cotton-tipped probe, applied at first below and later at its outer border, so as to render it more movable. This procedure has been carried out by Boucheron, Miot and others, when he considers it advisable to remove the stapes, and this we consider very rare, it can be extracted either with the forceps, or better by means of a blunt hook passed between the dura after dividing the at-

tachments about the foot plate. He packs the ear with antiseptic gauze, but in a few hours this is removed and the ear syringed with a weak antiseptic solution, a saturated solution of boric acid or a bichloride solution, 1-5000 being used, and the gauze is replaced. Upon the following day the gauze is dispensed with and the patient is ordered to douche the ear with the antiseptic solution, twice or three times daily according to the amount of the discharge. Too much douching is highly objectionable, the purpose being only to keep the parts cleansed.

We most strongly object to this douche, as it prevents the prompt healing of the wound and tends to produce a moist condition and discharge. For this later free discharge he has to resort to another agent, a solution of boric acid in alcohol being dropped into the ear after each douching. He is not afraid of a 10 per cent. solution of cocaine, which he employs, as do we, in excising the new membrane, which he keeps in contact with the membrane for a few minutes. In making this section, which he does several times if necessary, he differs in his methods as follows:—The section of the extra membrane is made first with a sharp pointed knife and completed with a blunt one. When half of the circumference has been divided, the relaxation of the membrane makes the completion of the section difficult. This he states may be overcome by making a second puncture close to the original starting point, and completing the section by carrying the knife in the opposite direction. The fragment is then held at two points only and is easily detached with the forceps.

In plethoric patients he considers it necessary that the diet should be restricted for a few weeks before and after the removal of such a membrane, and he thinks this aids very much in preventing complete closure of the artificial opening. In conclusion he states:

"In the technique of the operation I am aware that I have differed somewhat from other writers. In the division of the incudo-stapedial articulation, I prefer to press the shaft of the knife closely upon the antero-internal aspect of the long process of the incus and cut downward, completing the division if necessary by cutting from below upward with the point

of the instrument, rather than pressing the knife against the posterior aspect of the long process of the incus, as is often advised. My reason for this is that the field of operation is in much better view in the former case than in the latter.

In removing the incus, the method described is the reverse of that advocated by Kretschmann (*Archiv für Ohrenheilkunde*, vol. xxv., p. 192), who was the first to formulate this procedure. This surgeon devised an incus hook with a double curve, the distal extremity being cup-shaped. To remove the incus, the

bent part of the instrument was carried into the fornx, the distal extremity looking backward. Retation of the instrument backward upon the axis of the shaft, carried the cup-shaped end of the hook over the short process of the incus, thus bringing the ossicle into view. In my hands, this method has not succeeded as well as using the simple hook already mentioned, and carrying it in the opposite direction. It certainly would seem that backward rotation would be more likely to dislocate the ossicle into the mastoid antrum, than manipulation in the opposite direction."

TRIONAL: ITS RANGE OF APPLICABILITY.

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In casting about for an hypnotic we have the ideal in view. We look for a substance which while easily administered, will promptly produce sleep in all respects like the normal and for about the normal period, and which will make no deleterious impression upon the system in any way.

So perfect a drug would imply, so to speak, a perfect pathology of the symptom, insomnia. That this is more true in an abstract sense than is generally admitted, I am inclined to believe. Whenever that portion of the nervous system involved in the maintenance of consciousness is active when in the normal course it should be inactive, the immediate cause, if the physiological theory of sleep is correct, is the continuance of too active and too voluminous a blood supply to the tissues concerned.

A drug that will regulate this disturbance will prove a true hypnotic. That its power to do so will depend largely on the given cause of the hyperæmia, is a foregone conclusion. Where fever and pain are absent or trifling in degree, Trional and other drugs of the same class seem either to reach the cause or in some other way abolish the symptom. That they do it by overcoming the hyperæmic condition rather than by directly stupefying the

cortical cells is, from the observation of the normal quality and quantity of the sleep produced, a rational conclusion.

The superiority of Trional in promptness, ease of administration, and absence of bad or disagreeable after-effects, over most, if not all, other hypnotics, seems fairly well established.

When a dose of fifteen grains is given, sleep usually ensues within a half hour, if at all, and this result seems but little altered whether the drug be administered in a warm vehicle (it does not readily dissolve), or given as a dry powder, or in capsules. It is indeed often so prompt that the patient sleeps within a very few minutes after injection. The dose in some cases must be larger than fifteen grains, although I should not advise more in any case unless the susceptibility of the patient had been first ascertained and in many cases I believe ten grains would prove efficient. It may be safely repeated at least once in a night, and in an hour if necessary.

As to disagreeable after-effects, some of my patients have complained of a feeling which they are hardly able to describe, but while it may be an approach to vertigo, I gather it is rather more closely akin to the sensation which is experienced when we are obliged, though intensely sleepy, to keep awake for some reason not very forcible or agreeably stimulating. It has usually oc-

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curred when proper composure and disposition of the body has not been attained in time to yield freely to the effects of the drug. A feeling of drowsiness during the following day has in a few instances out of quite a large number of observations, been noted. This again is very much like the feeling which normally follows an ordinary good night's rest after a number of previous nights have been sacrificed.

In the following cases the dose was in each instance fifteen grains—unless otherwise specified and was always given at bedtime.

Mrs. O., aged forty-two, since her husband's death some weeks before, had lost her appetite and suffered from globus and sleeplessness. There was no cardiac murmur but the first sound was decidedly weak. In this case, as in several others, the dizziness alluded to, occurred. She slept well after each dose.

Mrs. S., aged twenty-nine, who had had an ovariectomy performed a year ago and eight weeks since another gynecological operation of which I did not learn the nature, was dominated by some imperative ideas which caused her to dread going alone into the front room of her house, and to tremble with fear at the sight of a funeral procession. She had a tender abdomen, obstinate constipation, and slept only two or three hours in a night. A few nightly doses with the use of cod liver oil and tonics and proper attention to the bowels, started her at once on the road to improvement.

Mrs. R., widow, aged forty, with three noisy and ill-behaved children, suffering with a neuritis the result of a fall, gained the rest which had long failed her with the first dose.

Mrs. —, aged sixty-three, widow, had an aortic murmur, dilatation of the stomach, some pulmonary oedema, and partial suppression of urine. Sleep had been poor for weeks but came promptly with the use of Trional.

Mrs. McK., aged twenty-three, had slept poorly during the last weeks of her gestation and continued to do so after labor. The first dose failed but the second, on the following night, succeeded.

Mrs. L., widow, aged forty-seven, with cardiac hypertrophy, chronic pericarditis, loud mitral murmur, bed-ridden for several months, slept well on Trional. Bromides, stimulants, and antispasmodics had

been used before with indifferent success. Trional was administered only every other night. After some three or four doses had been used in this way, she experienced a severe attack of cardiac depression (she had before had a number of milder attacks.) Trional, however, had not been taken on the night immediately previous to this attack, but the possible influence of it as a causative factor would nevertheless seem to point to caution in its administration in a case of so extensive heart lesion.

Mrs. E., aged thirty-two, always a poor sleeper, was suffering from very violent headache, which had been preceded by an acute coryza and was accompanied by neuralgic pains in the sciatic nerve, from which she often suffered. She took during the night Trional, and during the day:

Potass bromid.....	3 iij
Tr. cannab. ind.....	f. 3 iij
Ext. ergot. fid.....	f. 3 ij
Syr. acac.....	f. 3 ij
Aquae, q.s. ad.....	f. 3 vj

M. Sig. One tablespoonful every three hours.

She was completely relieved in forty-eight hours.

Miss E. F., aged forty-seven, had been for some months under treatment for vague nervous symptoms, including a girdle sensation and various paræsthesias of the lower limbs. Her sleep was poor. She described the feeling just prior to going to sleep as "very queer." and was drowsy all next day.

Miss A., aged forty, a neurasthenic with frequent neuralgic and migrainous attacks, had some wheals of urticaria which she feared would result in another severe attack such as she had a year previous and which had proved extremely rebellious to treatment. She took Trional for two nights in succession, with three grains sodii salicylas, three times a day, and promptly aborted the attack.

J. C., male, aged thirty-two, in an advanced stage of pulmonary tuberculosis with a neuritic palsy of the serratus magnus muscle, had just passed through several slight hemorrhages. He slept very soundly under use of Trional, but was very drowsy all next day.

Miss D., aged twenty-three, always a poor sleeper, was suffering from the depression of influenza. She slept soundly on Trional.

G. S., male, aged forty, was in the period of delirium and hallucinations of sight of his first attack of delirium tremens. He was extremely tremulous and his urine was loaded with albumen. His appetite had been very poor for months before the attack, which resulted from steady hard drinking rather than from occasional debauches. His sleep too had been extremely poor. The Trional failed entirely, though repeated within an hour, and later in the night one-quarter grain of morphia was used hypodermically and succeeded in producing sleep. A few nights later, when the delirium had almost entirely subsided but the sleep had not yet become established, twenty grains of Trional succeeded admirably and no further medication was required in this direction.

Mrs. D., aged thirty-nine, of an hysterical diathesis and suffering great nervousness and depression from anxiety about a very sick daughter, slept fairly well on taking fifteen grains of Trional.

Trional was also given in a variety of conditions in smaller doses with a view of ascertaining what other properties besides those of an hypnotic, it might possess.

In a number of the milder cases of la grippe that presented, where the main symptoms were a decided nasal and pharyngeal catarrh, doses of one to three grains every two or three hours when used alone, seemed to speedily dissipate the symptoms, but when combined as in the following formula, acted still more efficiently especially in such cases as had subsided into a subacute form, or where a chronic catarrhal affection had been exaggerated by the epidemic influenza.

Quin. Sulphat.....	} āā gr. x.
Trional.....	
Salol.....	
Camphora.....	

M. et. in capsul. no. X div.
Sig. One capsule four times a day.

It will be seen that the quinine and salol were given in too small a dose to have much efficacy alone; while it must be admitted that camphor is usually a very excellent medicament in the more acute cases of this kind in the dose used. I am, however, inclined to think that the combination is more useful than is any one of the drugs singly, and this too with a full experience in the use of the older ones.

In a case of severe chorea, which the mother said had existed since infancy the

boy being seven years of age, quite remarkable results were achieved by the administration of four grains t.i.d., for two weeks. Fowler's solution had been tried for the same length of time without any appreciable result. The patient being a dispensary case, has not returned, so that the further result remains in doubt. In another case of chorea, a girl of four, three grains, four times a day, failed utterly to do good.

A woman of sixty, with a heart murmur, had also been for some months afflicted with a brachial neuritis, which periodically became intensely painful and required occasionally the use of opiates. She was very promptly relieved in her last attack, and apparently more permanently than previously by:

Quin. sulph.....	grs xx
Trional.....	grs xxx

M. in caps. no x div. Sig. One every three hours.

It should be stated that quinine, phenacetine, acetanilid, salol, and other analgesics, had been freely used in former attacks.

I think myself fully warranted in coming to these conclusions:

1. That Trional deserves a high rank amongst hypnotics.
2. That it has a useful range of application in catarrhal inflammations.
3. That it deserves trial in neuralgic and myalgic affections.
- 4 That it may be found useful in chorea and other neuroses.

Prostatitis.

Ichthyol.....	o 5
Ext. bellad.....	o 15
Butyr. cacao.....	15.0

M. f. massa, ex. qua. formentur. Suppositoria x.

Sig. To be introduced once or twice a day after a movement of the bowels.

Ammo. sulfo-ichthyolic.....	0.3-0 6-0.75
Ol. cacao.....	2.0-2.5

Misce exactissime f. suppositorium.

Sig. Used as a rule twice every day, one in the morning after a movement of the bowels, and one in the evening before going to bed.

—Times and Register.

To Relieve the Thirst of Diabetics.

Pilocarpin nitrat.....	gr. ss.
Spiritus vini dilut.....	m. xx.
Aque.....	5 i.

M. Sig. The tongue is to be moistened with 5 or 6 drops of this solution four or five times daily.

Uremia.

Tinct ferri chloridi.....	3 ss
Spiritus aetheris nitrosi.....	āā 3 i
Lid ammoni. acetatis.....	3 iiss
Aquae destillatae.....	3 iiss

M. et fiat mistura. Sig. Tablespoonful in a wine-glass of water.

DIFFERENTIAL DIAGNOSIS OF RÖTHELN, ROSEOLA, MEASLES, AND SCARLATINA.*

H. J. WARMUTH. M.D., SMYRNA, TENN.

Nothing in the whole domain of pædiatrics has produced so much perplexity or worry to the mind of the medical man, as the difficulty often experienced in forming a correct and satisfactory diagnosis between rōtheln and the other eruptive fevers in question; not so much on account of the treatment, which in either case cannot be of any possible harm to the patient, but on account of a forced and needless isolation, which necessarily must entail loss of time and money upon the parents of the patient or upon the patients themselves.

Rōtheln has been frequently mistaken for roseola, and various writers have given a very correct description of the latter under the false synonyms of "Rose-rash" and "Roseola epidemica." When we consider the fact that roseola is a non-contagious dermatitis while rōtheln belongs to the class of eruptive fevers which are more or less contagious, we cannot understand how some writers can advance the theory that roseola will, under certain conditions, assume an epidemic character, become contagious, and acquire the power of self-propagation.

Rōtheln—rubeola, or "German measles," or "false measles,"—has been known and accurately described in the United States as far back as 1845. This malady seems to have its appearance first in Boston, then in New York, and from that city it has spread all over the country.

It is a hybrid, an intermediate between measles and scarlatina, and yet distinct from either in that it does not confer immunity against either of these diseases. In some epidemics it partakes of the character of measles, while in others it resembles scarlet fever, and in yet other instances it stimulates both, rendering a diagnosis extremely difficult.

In very mild cases the prodromata are wanting, or so mild as scarcely to attract

attention. In some epidemics, however, nausea and vomiting, slight catarrh, sore throat, and especially an enlargement of the glands of the neck back of the sternocleido-mastoideus, which is characteristic of rōtheln, form the initial symptoms. In from six to twelve hours, with an increase of fever (which scarcely ever exceeds 101° or 102° F), a rash appears upon the forehead, around the ears and along the neck, and, traveling downwards, soon spreads over the rest of the body.

The eruption is characterized by numerous small points thickly set, or circular spots or blotches, of a color intermediate between the scarlet of scarlatina and the dusky red of measles, while between the borders of the rash the skin presents a normal appearance. In exceptional instances the intervening spaces assume an erythematous redness, resembling the efflorescence of scarlet fever. With the exception of the scalp, the plantar and palmar surfaces, the exanthem will appear upon any part of the body and is always accompanied by incessant itching. The rash disappears by the fourth day; in warm weather it remains longer. When mild or idiopathic, it leaves a brown spot; when simulating measles, desquamation is followed by a branny exfoliation of the epidermis; and in the scarlet fever variety, desquamation consists of small scales but never of shreds or flakes.

The attack terminates within a week and complete recovery takes place within twelve or fourteen days. Complications are not frequently met with. As a rule there are no sequelæ, although I, Lewis Smith and other writers, mention chronic bronchitis, enlargement of submaxillary glands, albuminuria, and dropsy.

From roseola it can best be distinguished by the simultaneous appearance of fever and rash in this affection; the absence of catarrhal symptoms and of glandular enlargement.

The diagnosis of rōtheln from measles or scarlatina for the first two or three days

* Read before the Tennessee State Medical Society, April, 1895.

is often difficult, sometimes impossible. The croupy cough appearing three days before the rash, the severe catarrhal symptoms, the very red conjunctiva with marked photophobia, are characteristic of measles. The short duration of prodromic symptoms, the shivering, the excessive headache, and especially the vomiting and

sore throat before the appearance of the eruption, distinguish scarlatina from r  theln, whose premonitory symptoms are either very mild or wanting.

The temperature in measles ranges as high as 104  F, with an accelerated pulse, which is in proportion to the temperature; in scarlatina it reaches sometimes 106 

DIFFERENTIAL DIAGNOSIS.

	R��THELN.	ROSEOLA.	MEASLES.	SCARLATINA.
Prodromata.	Wanting or very mild. Sometimes slight catarrh; sore throat; enlarged glands; nausea and vomiting.	None. Rash and fever appear simultaneously.	Malaise; severe catarrh; watery eyes; photophobia.	Shivering; headache; hot skin; vomiting; sore throat.
Period of incubation.	9-21 days.	None.	10-14 days.	4-10 days.
Occurrence of eruption.	6-12 hours.	Fever and rash appear together.	3-4 days from onset of fever.	2-3 days from fever.
Character of eruption.	Small, dark, rose-colored points, sometimes like measles, but lighter; at other times like scarlatina; with normal skin between margins. Appears first behind the ears, forehead, face, etc., and travels downward.	Small rose-colored papules slightly elevated. Scattered over chest, neck, face, abdomen, and sometimes over the rest of the body.	Papular in character, like flea-bites. Of brick-red color. First on forehead, ears, face, and gradually extending over the whole body.	Bright scarlet dots, which coalesce without leaving normal skin between borders. First on chest, neck and face, and gradually invading the rest of the body.
Pulse and temperature.	In proportion to temperature, which ranges from 100-102 degrees.	Quickened. Normal; seldom 102 degrees.	Quick, but bears a ratio to temperature, which ranges from 101-104 degrees.	Very fast, and out of proportion to the temperature, which often reaches 105-106 degrees.
Eyes.	Pinkish-red.	Not affected.	Red, watery. Photophobia.	Very red.
Tongue.	Furred.	Slightly furred.	Furred, but not coated.	Strawberry tongue.
Fauces.	Red.	Little injected.	Dark-red and swollen.	Dusky-red. Very much swollen.
Condition of bowels.	Normal.	Normal.	Diarrhoea.	Normal; occasionally constipation.
Kidneys.	Rarely affected.	Not affected.	Not affected.	Nephritis and albuminuria frequent.
Glands.	Affected from beginning.	Not affected.	Bronchial glands always enlarged.	Enlargement after a few days of fever.
Desquamation.	Brown spot; when like measles it consists of a branny exfoliation, and when simulating scarlatina it consists of small scales.	Leaves a distinct discoloration; seldom followed by desquamation.	Purpuraceous exfoliation of epidermis.	Peels off in flakes or shreds.
Contagiousness and Duration of same.	Feebly contagious. 10-14 days.	Not at all. 24 hrs.-3 days.	Contagious and infectious. 14-21 days.	Very contagious and infectious, and lasts as long as desquamation, and longer.
Sequelae.	None.	None.	Ophthalmia. Affection of organs of respiration, Diarrhoea.	Nephritis, endocarditis, suppuration of glands, etc.
Termination.	Recovery.	Recovery.	Recovery, but sometimes followed by bad health.	Recovery; frequently retarded by sequelae.

F, with a pulse greatly quickened but out of proportion to the height of the fever; in r  theln the temperature rarely reaches 101   or 102   F, and the pulse bears a ratio to the temperature.

In measles the bronchial glands are enlarged; in scarlatina an enlargement of the glands of the neck takes place after the first few days of fever; and in r  theln it is present from the very beginning of the attack, especially back of the sternocleidomastoids.

The eruption in measles is more of a brick-red color, papular in character, like flea-bites, and appears on the third or fourth day of the fever. In scarlatina the skin is swollen and unusually hot to the touch; the rash consists of small points of a bright scarlet color, more intense at the center and gradually fading from center to circumference; it becomes confluent by its borders, without leaving any skin of normal appearance between, and appears on the second day of fever. In r  theln the dark-red, rose-colored points may coalesce into patches, but the skin between the margins presents a normal appearance.

In measles and in r  theln the tongue is slightly furred, but in scarlatina we find the characteristic strawberry-tongue which is formed by the projection of the enlarged red papill   through a thick, white fur.

The fauces in measles are very red and swollen; in scarlet fever they are dark-red, very much swollen and frequently covered with a white tenacious mucus, and this throat affection is always in proportion to the eruption; but in r  theln, though the fauces are red and slightly swollen, they are dry.

While diarrh  a is characteristic of measles, the kidneys are not affected; in scarlatina there is no diarrh  a, but albuminuria and dropsy; and in r  theln the bowels are not disturbed, but the kidneys may become, though rarely, slightly affected.

In measles desquamation begins on the seventh day of fever and consists of a furfuraceous exfoliation of the epidermis; in scarlet fever a peeling of the scarf skin in large flakes or shreds begins on the fifth day; and in r  theln desquamation consists of small bran-like scales.

Measles and scarlatina are both contagious and infectious, while r  theln is feebly contagious.

The duration of infectiousness in measles lasts from fourteen to twenty-one days; in scarlatina as long as desquamation lasts and even longer; and in r  theln from ten to fourteen days.

The sequel  e in measles are ophthalmia, chronic diarrh  a, and various affections of the organs of respirations; in scarlet fever, otitis, nephritic troubles, endocarditis and suppuration of glands; and in r  theln practically there are none.

The termination of all three exanthematous fevers is towards recovery, and only in severe cases of measles and scarlatina does death intervene, or an attack is followed by bad health.

Typhoid Fever in Infants.

1. Typhoid fever occurs more frequently in children than is generally supposed.

2. The fact that ulceration and hemorrhage is much less frequent would explain the absence of pronounced abdominal symptoms.

3. The erratic, undeveloped and hypersensitive nerve centers in early child life explain why the toxic secretions of the Eberth bacillus should make cerebral symptoms very pronounced.

4. Given a child of any age with or without intestinal disturbance, with a continued elevated temperature, with or without marked evidence of cerebral disturbance, the possibility of the presence of the Eberth bacillus of typhoid fever should be constantly kept in mind.—*Journ. Am. Med. Assoc.*

Bacteriological Examination of the Vaginal Secretion During Pregnancy.

With a view to determine the presence or absence of germs in the genital tract of the pregnant patient, where no possibility existed of contagion, Krong (*Deutsch. Med. Woch.*) has made a series of examinations in the Leipzig clinic. He had forty-eight cases, and his results show that the natural resisting power of the tissues is the same to both spores and cocci. Streptococci were killed in a very short time. Two days is the longest time in which germs introduced within the body remained alive. The genital tract is aseptic in healthy women when from forty to seventy-two hours have elapsed since the last examination.—*Am. J. M. Sci.*

DIFFERENTIAL DIAGNOSIS OF THE ERUPTIVE FEVERS, WITH SOME OBSERVATIONS ON EPIDEMIC AND ENDEMIC INFLUENCE IN THEIR PREVALENCE.*

J. S. NOWLIN, M.D., SHELBYVILLE, TENN.

They are similar in that each has a period of incubation, a period for the fever, and other symptoms prior to the eruption, and a time for the eruption and decline.

Variola or small-pox is the most virulent of the contagious diseases when the people are not protected by vaccination. I believe that vaccination of the greater number, together with modern sanitation, modifies it greatly among those who have not been vaccinated. The incubation is from seven to twelve days but has been known to reach twenty. Intense frontal headache, intense lumbar pains, and aching limbs are peculiar to small-pox. They are more excruciating in this than any of the eruptive fevers. Frequently there is persistent vomiting. On the first day the temperature rises rapidly to 104° or 105° F. The face is flushed; the eyes bright and clear. There may, or may not be delirium, which is dependent on temperament and brain sympathy. Convulsions are not uncommon with children. In a few cases, on second or third day, certain rashes appear which are well calculated to lead the attendant astray as to measles or scarlatina. The throat is oftentimes quite sore. Cough may be present, but is not a prominent symptom.

The eruption appears from the third to fourth day of the initial fever. It is a red spot with a shot-like feeling. It shows first on the forehead near the hair, and also on the wrists. Within twenty-four to thirty-six hours it may be seen on the chest and limbs. The red spot develops into a vesicle, which soon becomes umbilicated and ends in a pustule.

As the eruption comes out the fever cools and the pulse and temperature become normal for one or two days, but when the papules vesicate, the fever rises the second time.

Rubeola or measles also has an incubation of ten or twelve days. Fever runs

four to five days before the eruption appears. It is not so high as in small-pox. It does not cool with the eruption, but continues until convalescence. Patient feels chilly, has head-ache, back-ache and pain in limbs, not so severe, however, as in small-pox. There is sneezing, cough, free nasal discharge and copious lachrymation. Conjunctiva red, some redness in throat, huskiness of voice, and soreness in chest.

The rash appears on the cheek or forehead about the fourth day, sometimes later. It is a small red papule which may coalesce with others. The cuticle of the face is thickened. The eruption passes from the face to the body, thence to the limbs, occupying three or four days; disappearing on the face as it comes out on the feet.

Let us compare the semiology of small-pox and measles.

SMALL-POX.	MEASLES.
Fever cools on eruption and returns again.	Fever never cools until convalescence.
Eyes clear and bright.	Eyes red, suffused and watery.
Excruciating pain in head, back and limbs.	Pains not so severe.
The mucosa of eyes, throat and lungs not much involved.	Mucosa of eyes, throat and chest all catarrhal.
Papules shot-like: change to vesicles and then pustules.	Papules only thickening of the skin, no vesicle, no pustule.

In scarlatina the incubation is variable from three to ten days. Peculiar to childhood under ten years, though adults may have it. No special marked symptoms or prodromata.

The throat usually has a scarlet blush before the eruption, and the papillæ stand out prominently as red points dotted over a white coated tongue.

The fever does not precede the eruption more than two days, and frequently only one. It is intense, reaching a temperature of 104 or 105 degrees, with a pulse-rate of 120 to 150. The fact that it attacks children, the throat complication without catarrhal symptoms, together with the rash, which is a scarlet blush developed from little red points apparently under

*Read before the Tennessee State Medical Society, April, 1895.

the skin, reminding one of goose-flesh, and the paling of surface on gentle pressure with the finger, gradually returning from the outer margin to the center when the finger is removed, are sufficiently characteristic to differentiate it from the other exanthemata.

Varicella or chicken pox, is a disease of childhood but grown people have it. It is not a dangerous disease and becomes important only from its similarity to small-pox. It has an incubation of ten or twelve days; fever only twenty-four hours, when slight papules form on chest and may then appear on different parts of the body. After three or four days these dry into a small black scab without pustulation, or umbilication as in small-pox.

Rubeola, or r  theln, has many marked similarities to measles, and it is even now a question with many as to whether it is entitled to a distinct name. Some competent observers believe that it is a hybrid of measles or scarlatina.

The stage of incubation is placed by different observers at from five days to three weeks. The eruption frequently appears without premonition. It differs from the ordinary type of measles by beginning on the face and spreading rapidly over the whole body. Patterson claims that it makes its appearance simultaneously over the whole surface. The eruption is sometimes scant. Griffith saw it in circular bands above the knee. It disappears in twenty-four to thirty-six hours.

It differs from scarlatina and measles in the light character of the fever. The sore throat and facial catarrh are always present, but very mild. It differs from measles in the involvement of the lymphatic glands. The cervical, occipital, submaxillary and sublingual glands are affected in more than fifty per cent. of the cases. Sometimes the axillary and inguinal glands are swollen.

The light rose color of the eruption, its early disappearance in from one to two days, and the more extensive affection of the glandular system, with the fact that the symptoms gradually subside from the appearance of the eruption, distinguishes it from scarlet fever.

I notice that these diseases now and then prevail as epidemics. This is not only true with regard to the exanthemata by which one attack renders the subject immune for life, but it is also true of

cholera and la grippe, the two latter not bringing immunity from a second attack. I notice further that there is oftentimes an interim of five to ten years in which the people seem to be immune from any given one of these diseases. I claim that the great mass of the people are immune for the period of this interregnum, because I take it as an accepted fact that they do not originate *de novo*, let the cause be what it may.

I have observed further, that when one of these epidemic diseases has had its day, it is rapidly succeeded by each of the others until all have passed in review.

It is also a fact that when one of these maladies is prevailing, whether as an endemic (which I think is now accepted to mean only a more limited number of cases or to compass a smaller territory), or whether as an epidemic, the others all subside. That is to say the prevalence of one of these diseases renders immunity, for the time, from the others.

I know that cases have been seen, where two diseases were incubating in the same person, at the same time, and that the one became latent until the first had its course, and then became active. This seems only to prove that the causes of the two could not coalesce, but that both retained their identity and the more potent one ran its course first, holding the weaker in abeyance for the time being.

This does not disprove my proposition that there is such a factor as an epidemic influence which becomes wide-spread and prevails over states, continents and hemispheres at the same time.

Such were the facts two years ago, when small-pox prevailed as an epidemic in thirteen of the States of this Union, and at the same time was in England, France and Russia. Just preceding that, la grippe was gripping the people all over the United States and Europe. Since that time, as small-pox is yielding the field, scarlet fever is frightening the mothers of this country.

It cannot become so extensive because its class of subjects is limited by age.

One of the theories for natural immunity is the phagocytic, as set forth by Metchnikoff. It has been claimed to have a wider applicability than any other solution of this question.

The phagocyte is a white corpuscle which has the power of absorbing and

destroying bacteria. When the system would be infected with the particular bacillus or micro-organism having the power to produce one of these specific diseases, the amocloid cells, or white cells, absorb and destroy them either by digestion or a chemical process in the interior of the cell or corpuscle. Thus the leucocytes or white corpuscles of the blood, become, according to this theory, the defenders of the body against the myriads of bacteria.

We have also the humoral theories of immunity, which attribute germicidal force to the blood and fluids of the body.

Nuttall demonstrated the power of the blood to destroy bacteria. It seems to be established that the greater germicidal power of these fluids is in the serum of the blood. It is further claimed that this power is stronger in the serum of some animals than of others. Upon these supposed facts the blood serum therapy is now being tried. Without accepting or rejecting, I will say that I have no doubt much good will be developed from these investigations.

While it may or may not be true that the microbic theory of the etiology of diseases is correct, I am sure that the cause for these epidemic diseases, whatever it may

be, is existing continuously. I think power for resisting these diseases or the susceptibility to them cannot be found within, either in the blood or other vital forces of the body.

There must be certain external influences or environments which render the system susceptible.

This may be illustrated by gathering a regiment of a thousand men from the walks of civil life and putting them into camp. Measles and small-pox will soon appear among them and become epidemic. Not only so, but they will be subject to nearly all the epidemic diseases.

This is an endemic influence begotten of their changed habits and surroundings. While it is true a case now and then will be found among the people outside the encampment, yet it never becomes epidemic outside the camp, or if it should, it would not be from the nidus of the camping ground.

From these observations I conclude that there are long periods of time when the people are immune naturally, from one and all of the zymotic diseases. Also that this natural immunity from one is at the same time an immunity from all; which, if true, may be taken as proof of the unity in kind of the etiology of them all.

DIGITALIS.*

J. NEWTON HUNSBERGER, M.D., SKIPPACK, PA.

If human existence is ever prolonged by the use of a drug—and the question, to say the least, is debatable—digitalis stands at the head of the list. But there is not a therapist living who can point out a drug, or a combination of drugs, that can at all times, be relied on to fight disease to a successful issue. We have nothing in medicine that we dare pin our faith to, unless we are riding a hobby, and hobby horses notoriously are uncertain animals.

Looking over the whole category of acute diseases, it is absurd to say you can abort any of them by the use of drugs, or that we have any known remedy which acts directly on the exciting cause, what-

ever that may be. All we can hope to do is to second our patients with bottle and sponge, clear the ring and give nature a fair fight—never forgetting that depressing measures, except in a very few cases, will impose a handicap on our patient that may cause the fight to be lost.

In chronic heart disease, whether affecting the heart muscle itself or the valves, digitalis and rest in the recumbent position are about the only remedies worth mentioning.

A cardiac murmur, whether loud or soft, unaccompanied by any other symptoms of a deranged organism, demands no treatment whatever, unless it be some advice regarding over-exertion or violent exercise. It is only when signs of failing

* Read before the Montgomery County Medical Society, May 1, 1895.

compensation occur that active treatment is needed. I recall vividly when in my early college days as I listened in awe to the learned dissertations of my instructors on little weak, scrawny murmurs, I stood in such fear of abnormal sounds that I could always hear the creaking of the graveyard gates as I auscultated the hearts of the poor unfortunates. It is not the murmur so much as the force of the cardiac impulse which should put us on our guard. To say that digitalis should be used not at all or very carefully in some forms of heart disease, applies to any drug that is capable of affecting the system so powerfully.

But I wish particularly to speak of the use of digitalis in acute disorders—principally diphtheria, typhoid fever and pneumonia. Let us glance at the physiological action of digitalis upon the circulation. The first effect noticed is a decided decrease in the number of heart-beats, due to an increased period of diastole. The systole is increased in force so that the ventricles become pale or white as the blood is squeezed out of them. This complete systole drives out all the venous blood from the heart muscle. The coronary arteries arise at about right angles to the aorta, and as the latter fills during systole the blood passes into the aorta in an unbroken stream, and probably little blood enters the coronary arteries at this time. But when the reflex wave causes the aortic valves to close, the blood rushes into the coronary arteries with all the force of the increased arterial pressure, filling to their utmost capacity the cardiac arterioles supplying the life-giving oxygen to the hardest worked muscle in the body, feeding the nerve centers existing in the heart, and taking out the carbon di-oxide and debris of combustion.

In disease, the feeble heart is unable to free its walls of venous blood during systole; the systemic arteries are not filled sufficiently to produce a reflex wave strong enough to fill the coronary arteries, and the weakened muscle becomes still weaker from starvation. More than this, the lack of properly oxygenized blood to the muscle-wall tends to paralyze the peripheral inhibitory centers and allows the accelerator fibres of the sympathetic to drive the heart to its death.

I quote H. C. Wood: "Digitalis in moderate doses stimulates the musculo-

motor portion of the heart, probably its contained ganglia, increases the activity of the inhibitory apparatus and causes contraction of the arterioles, probably by an action on the vaso-motor centers in the cord, and also upon the walls of the arterioles.

"In consequence of the first action the cardiac beat becomes much stronger, as the result there is narrowing of the blood paths, and to the passage of the vital fluid an increased resistance, which acting on the already excited inhibitory system tends to slow the pulse."

I might also speak of digitalis as a mild antipyretic, and I am convinced that it has such an action even though it is feeble. But antipyretic drugs should have no place in the treatment of acute disorders. What can not be accomplished by the use of external cold cannot be safely accomplished by internal medication.

I suppose it would be considered rank heresy to leave out antitoxine in considering the treatment of diphtheria. And yet it savors strongly of quackery to imagine that a dram or two of serum in one or two thousand times that amount of blood will effect a cure. Before the Ides of March of another year shall come and go, the immunized horses of to-day will be relegated to the garbage carts.

A large percentage of the deaths from diphtheria are due to paralysis of the heart; heart-clot the result of cardiac failure; pulmonary congestion, the result of a weakened heart; and pneumonia. All are conditions indicating the use of digitalis. The heart beats may be excessively slow, as in paralysis, extremely rapid, or intermittent.

In all of these conditions, cardiac stimulation is demanded. Alcohol is probably of the most service when there is profound shock due to systemic poisoning—strychnine, when there are any symptoms of paralysis. But each of these drugs should be combined with digitalis. In the first place it steadies the heart, allows the blood time to become thoroughly oxygenized in the lung, and as oxygen is of the greatest value in all adynamic conditions, the necessity of ridding the blood of its carbon-dioxide is evident. In the second place, the heart increases its own supply of blood through the coronary arteries and thus puts itself in better condition to

fight the coming weakness. And last but not least, it is a stimulant to the pneumogastric nerve. This action undoubtedly has a tendency to prevent the paralyzes that so often follow attacks of diphtheria. After vomiting has been controlled, in all except the mildest cases, small doses of digitalis should be given, twice or three times a day. If any indications of cardiac weakness occur or cyanosis comes on, even if due to mechanical obstruction, among other remedies, increase the dose of digitalis. The drug should be continued in small doses until the end of convalescence.

In typhoid fever I have found digitalis of the greatest service, not so much in the first and second weeks, as later in the disease. In the earlier stages of the disease, with a fair ratio between temperature and pulse-rate, the heart acting regularly with a good first sound, stimulants of any kind will do more harm than good. But if the heart is irregular in its action, pulse out of all proportion to temperature, with a weak first sound, than digitalis is indicated. This condition, I believe is due, partly at least, to a poisoning of the inhibitory centers of the brain which allows the accelerator nerve to drive the heart so rapidly. You will often find in this condition a general nervous unrest, twitching of the muscles, of the face and of the limbs, inability to bear noises, and sleeplessness. I have seen digitalis act with the happiest results in such conditions—usually given alone, sometimes combined with the bromides. This quieting action of digitalis is due to an increased blood supply and of a better quality to the nerve centers, and also to a stimulation of the pneumogastric nerve.

We have the same action shown in the quieting effects of the drug when given in large doses in delirium tremens. Later on in the disease, say after the fifteenth day, 75 per cent. of all cases are benefited by digitalis—given probably once, twice or three times in the twenty-four hours. The tincture should always be used, given in from two to twenty drops, as often as indicated. The dose should always be regulated by its action on the heart. If the heart is rebounding strongly against the chest wall, lessen the dose or discontinue the drug entirely for a day or two. Harm may be done by an excessive action. The aim should be to attempt to keep the heart acting in proportion to the action of

the rest of the sick body. Do not expect a weak heart in a body emaciated perhaps to the last degree, to act as strongly as in health. But keep up a gentle, stimulating, tonic effect on the heart muscle and inhibitory centers.

You may be assured that you will always have a resultant action from the use of digitalis, and whether that effect does good or harm depends entirely on the skill with which you administer it. It is true that in typhoid fever the heart as well as the muscular system generally, may undergo degeneration changes. But you rarely find a general fatty degeneration of a waxy character in the heart muscle. It is usually granular, affecting small patches alongside of which are healthy fibers that have undergone no degenerative changes whatever. Instead of digitalis being contra-indicated in this condition, it may be of the greatest service. For there is no doubt but that a longer diastole, which means a longer sleep for the tired heart, with its stronger systole and concomitant better blood supply, will tend to lessen the area of fatty degeneration. More than this, the better oxygenated blood circulating throughout the system will improve the general tone of all the organs.

There is, probably, no one disease which has been treated with such a variety of methods as pneumonia. Each method, of course, followed by a large proportion of recoveries. It is, I think, generally recognized at the present time that pneumonia demands no special treatment, but that each case must be treated on the symptoms which it presents.

In a strong, robust man or woman, with a hard, rapid pulse, depressant measures, bleeding included, may be of the greatest value. But the great majority of cases the average practitioner sees are the pneumonias of children and not overly robust men and women—often those of low vitality. These are the cases that demand plenty of easily assimilable food, tonics and stimulants, of which digitalis is easily the most important.

It has not been proven that we can prevent the progress of pneumonia by any known method, or hasten a cure by any drug. There is also no doubt but that many active measures designed for the relief of the congested lung and to limit the area affected, do but sap the vitality of the patient and handicap nature in her

heroic efforts to heal. We should never forget that the vital elements which constitute life are always, even in health such civilization gives us, struggling for existence. They never pull down, they are ever striving to build up.

The treatment of the second stage of pneumonia is essentially one of stimulation. Digitalis is the drug that meets these indications and meets them more efficiently than any drug or combination of drugs in the pharmacopœia. It tends to prevent overdistention and paralysis of the muscular fibers of the right heart. It empties the ventricles and itself of all its blood by a complete systole; steadies the heart muscle by the action on the heart itself, but mainly by its stimulation of the pneumogastric nerve. This nerve supplies motor fibers to the muscular coats of the

entire bronchial system, including lobules and air cells; an important action in equalizing air pressure and preventing overdistention of healthy vesicles.

It must be apparent that digitalis, by its stimulation of this nerve, plays a most important rôle in respiration. The vagus also regulates the rhythm, keeping it working regularly. As is shown by section of both pneumogastrics in the neck, which diminishes the number of respirations to four or six a minute, until death finally occurs in five to seven days, we have from digitalis practically the same action on the respiration as on the heart. The breathing becomes fuller, steadier, stronger, the blood becomes more completely oxygenized, and the nerve centers, rallying with their fresh supply of oxygen, again take up the fight.

ETIOLOGY OF DIPHTHERIA.

P. J. FARNSWORTH, A.M., M.D., CLINTON, IOWA.

Spontaneous generation has long been disapproved. Bacteriology arose in its place. For a time it was thought that bacilli might be protean in form, and capable of transformation. It is now generally conceded that each reproduces its own kind, and causes its own disease. In some doubtful cases there may be similarity in appearance which has led to mistakes. Cultivation and inoculation tests decide the difference.

In this light, what is the immediate cause of infectious disease? The answer is ready, of course. The introduction and growth of a peculiar bacterium: variola from the germ of variola; scarletina from the infection of scarletina; and diphtheria from the introduction of the Klebs-Löffler bacillus. In the latter disease, as in the Parable of the Sower, many seeds fall by the wayside and are devoured by the phagocytes; others fall on stony ground and do not spring up; a few, unfortunately, fall on ground suitable to produce disaster.

It is not our purpose to describe the progress of the disease, but its beginning. Diphtheria starts in a hamlet or city, and prevails seemingly until the soil is ex-

hausted. It sometimes remains in one locality for several years perchance, invades only certain streets. It finds its way to isolated farm-houses and is confined there, or it may spread to the neighborhood. It does not arise spontaneously in either case, nor does some harmless germ suddenly develop malignancy. The genuine bacillus has been carried there and found a soil in which to propagate.

In many cases, heretofore, it has been impossible to account for its coming; in some instances the manner is patent.

With our present knowledge we may know our enemy and put ourselves on our guard against him. These are facts for our consideration:

"Under favorable circumstances in culture tubes, the bacilli have been found alive *after seven months*; and on bits of membrane kept in cloth, still alive after six months."

Dr. Fischer, of New York, found true diphtheria bacilli in the sinks and traps of houses where diphtheria had prevailed.

In mild cases the bacilli are found in the nasal secretions and in the throat where little disease seems to exist, and after the disease has disappeared, as sup-

posed. This is particularly the case among members of a family that seem to be immune.

These facts cannot be too widely known and acted upon to prevent the spread of the disease. When the disease breaks out do not look for its origin in the sewer or the well—such is only the soil on which it is planted, the seed has come from some other source. It may be carried in clothing and on the person for several months. Disinfectants may be used in the most thorough manner, everything be destroyed that has come in contact with the disease, yet the bacilli may remain in the nostrils or throat, or about the person of those that have had the disease or have been in attendance, and thus be “mysteriously” transported.

It is a noted fact in this city, that as soon as cold weather sets in and winter clothing is taken out, we have cases of scarlet fever. The germs have been packed away in the spring in spite of disinfection, and are ready to spread themselves when unpacked.

Some years ago, we had after cold weather set in, an epidemic of diphtheria. It began at the bottom of one of the highest, driest streets of the city. The disease went zigzag from one side to the other, missing some houses and striking others with violence, taking one or more

wherever it went. It traveled to the bluff, a mile from where it started; forty out of a hundred died. This happened fifteen years ago, when few precautions were taken to prevent its spread. It appeared in only two or three cases off the one street; though the soil would seem to have been better in many other localities. There is only one fact that offered any explanation—it followed the route of a certain milkman.

A more recent outbreak observed was in a farm house a mile from any neighbor. Sanitary surroundings were much better than on the ordinary farm. A sister of the farmer, living in the center of the State, had lost two children with diphtheria; a third child did not have it. Disinfection had been thorough. No clothing, nor anything in the rooms had been saved. A month in another house had elapsed when she came to visit her brother. Here were four children. The little girl of the sister slept with the two older girls of the brother. In less than a week these were attacked with diphtheria and died. The other two children had the disease in a milder form and survived. Every precaution was taken, but in four or five months it appeared in another farmhouse—a relative. It stopped there.

The cause was supposed to have been a foul well!

REDUCTION OF LUXATION OF KNEE JOINT BY FORCIBLE EXTENSION.

A. O. STIMPSON, M.D., THOMPSON, PA.

D. J. S., an intelligent young farmer of this town, while prying up a large stone in the field with a crow-bar, injured his knee so that he could neither straighten it out nor even bear his weight upon it in an attempt to walk. When the accident occurred on May 17th 1886, he, thinking that his leg was broken, was brought to my office by a neighbor's horse and carriage in order to be treated for the injury.

Learning the history of the accident and noticing that the pain was greatly aggravated on attempting to rotate the bones at the knee joint, I had come

to the conclusion that the trouble was caused by a dislocation of one of the loose cartilages of the joint and that this had got pinched between the head of the tibia and the femur. I got my patient seated in an office chair allowing his injured limb to assume as easy a position as possible and then made an examination of the joint. I found it as immovable as if chronically ankylosed; but I soon discovered that a loose cartilage had been pinched and permanently confined between the head of the tibia and the extremity of the femur.

Rotation of the limb and heroic manipu-

lation did not alter the condition of affairs. I now placed his limb (which had continued to remain in a semiflexed condition) on another chair with his heel resting on the edge of it, then by diverting his attention from what I intended to do I suddenly pressed on this knee with my two hands, leaning my whole weight upon them. A loud snap (like a pistol shot) was heard, and subsequently the fellow could walk around the room as well as ever.

I must not, however, omit to mention that there was also a partial dislocation of the tibia forward, hence the rigid condition.

The cause of this peculiar surgical deformity is easily understood when it is known that this man used his leg (twisted around the crowbar) as an aid in his efforts to move the large stone, thereby materially increasing the leverage power.

ACUTE NEPHRITIS IN THE PNEUMONIA OF CHILDREN.

Dr. Popoff reported four cases recently under his care in which acute nephritis occurred in the course of pneumonia. The first patient, a girl of twelve years, had previously had pneumonia at the age of four, but there had then been no trace of albumin in the urine. She was brought to the hospital suffering from fever, cough and a painful point on the side. Her illness had begun eight days previously with vomiting, delirium and fever, and all the physical signs of pneumonia, which ended in crisis on the ninth or tenth day, with profuse perspiration. The urine was examined upon the day following her entrance to the hospital, and found to be scanty, cloudy, and full of albumin. Microscopical examination showed hyaline and hæmatin casts and leucocytes. These disappeared in a few days, but the urine continued to show a heavy precipitate of albumin. There was no œdema nor symptoms of uræmia. The general condition of the appetite remained excellent. Treatment with methylene-blue was without effect.

The second patient was a boy five years of age, without any previous history of disease. He was brought to the hospital for fever, dyspnoea, and generalized œdema, the latter symptom having appeared on the second day of the disease. All the physical signs of pneumonia, with albumin in the urine, were present. At the end of fifteen days the child left the hospital completely cured. The third case, a girl of six years, with pneumonia, passed urine containing blood-cells and hæmatin casts and 1 per cent. of albumin. She died ten hours after her entrance into

the hospital, and the post-mortem examination revealed the presence of pleuropneumonia, acute epithelial nephritis, and tumefaction of the spleen. The fourth case was that of a boy twelve years old, with pneumonia and urine rich in albumin. Autopsy showed adhesive pleurisy, double pneumonia, hypertrophy of the spleen, and parenchymatous degeneration of the liver and kidneys.

From these four cases Dr. Popoff concludes that nephritis generally appears on the fourth or fifth day of the pneumonia, the most common symptom being bloody and scanty urine. Anuria or uræmia may supervene, but the casts and hæmatins generally disappear rapidly. The duration of the nephritis may vary from eight to seventy days, though the average duration is from fifteen to thirty days.—*La Médecine Moderne*.

The Effects of Chloroform on the Organism, Especially on the Kidneys.

Allessandra (*Il Policlinico*), draws attention to the fact that in most cases the effects of chloroform on the kidneys are practically *nil*. In patients with renal affections, however, this condition of perfect safety cannot be said to exist, and the author urges very strongly the necessity of carefully observing the urinary secretions for one or two days after the administration of chloroform. When renal lesions are actually in existence chloroform should either be avoided, or at least given with the greatest caution, and prolonged or repeated anesthetics inadmissible.

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SATURDAY, JUNE 8, 1895.

EDITORIAL.

“ACCIPE HOC.”

By the time he has abraded old wooden benches and has been burnished by the process sufficiently to convince Alma Mater of his fitness for a binding “in full sheep,” the medical student is generally in a condition, mental and physical, to interpret the formal words conferring his diploma as a benediction on himself and on humanity at large. He feels that he has finished an irksome task and henceforth is to enjoy the fruits of his labors. Moreover he has an hieroglyphic which certifies to all men that he is qualified and has received the Doctorate degree in Medicine. This talismanic parchment bears the seal and superscription of the faculty, and surely must bring him fame and fortune. He is now one of the initiated. Didactic lectures have revealed to him the mysteries of disease; clinical demonstrations have discovered how to recognize and treat it; in fact he has seen for himself how easy and simple to the initiate is the whole subject which to the

novitiate was a dark and bloody secret. He is stuffed and fairly suffocating with the latest improved scientific medicine. Modesty alone deters him from expressing the confidence he feels that he is amply qualified to fill any vacancy which might occur in the faculty of medicine.

We welcome the new recruit to our professional ranks and cordially extend our best wishes for the realization of his highest ambition. We do not wish to obtrude any advice, nor do we expect any individual graduate to apply to himself what we have to say; but the public have some rights which must be respected even by the infant doctor, and to the medical graduate in general we address a few hints gleaned from experience.

What you do not know about medicine would fill so many books that we doubt that even the world itself could contain them. What you have heard and read during your college education is a huge mass of undigested and indigestible ma-

terial which contains a few elements of intrinsic value. Dogmatic assertions, wind-fallen theories, professorial predilections, demonstrators' hobbies, quiz-masters' "pointers," clinicians' vagaries, and lecturers' platitudes have been so intimately mixed with some truths that are really of value, and the conglomerate has been so constantly and recklessly hurled at your devoted head, that only bitter experience can teach you how much that has been learned must be unlearned to bring some degree of order and co-ordination out of the uncorrelated fragments of truth which will remain. The first lesson, the one hardest to accept although the easiest to comprehend, and the lesson which must be mastered before experience will undertake to instruct at all, is the apprehension of the fact that you know—nothing. The sooner this fact is fully realized the better are your chances for achieving the greatness of your ambition. Probably no other one thing has limited the possibilities inherent to a vast number of medical practitioners, more than the failure to grasp this same primary truth, or else to learn it soon enough.

When we say you have so much to unlearn we are not reflecting upon the teachers who instructed you, nor upon the writers of the books you may have read. A physician, great as a teacher, greater as a writer in general literature, but greatest as a man who, understanding his fellow men, could give expression to his sympathy; a man whom the world delighted to honor; Dr. Oliver Wendel Holmes, speaking of the existing methods of medical teaching, said:

"The reason why we teach so much that is not practical and in itself useful, is because we find *that* the easiest way of teaching what *is* practical. If we could in any way eliminate all that would help a man to deal successfully with disease and teach it by itself, so that it should be tenaciously rooted in the memory, as easily

summoned when wanted, as fertile in suggestion of related facts, as satisfactory to the peremptory demands of the intelligence as if taught in scientific connections, I think it would be our duty so to teach the momentous truths of medicine, and to regard all useless additions as intrusions on the time which should be otherwise occupied. But we cannot successfully eliminate and teach by itself that which is purely practical. The easiest and surest way of acquiring facts is to learn them in groups, in systems, and systematized knowledge is science. You can very often carry two facts fastened together more easily than one by itself, as a housemaid can carry two pails of water with a hoop more easily than one without it. You can remember a man's face made up of many features, better than you can his nose, or his mouth, or his brow. Scores of proverbs show you that you can remember two lines that rhyme better than one without the jingle."

Neither is your task now accomplished so that you may cease from your labor and enjoy the fruits of your work. You have been emancipated, perhaps, from old lectures and from benches which are coëval, but you have not been emancipated from work. On the contrary, experience will be sure to teach you that what you have thus far regarded as work is in truth recreation compared to the ceaseless toil and unrelenting care and labor inevitable to the practice of medicine. You are not leaving school to work as a craftsman in some trade, nor to take part in the traffic of commerce, nor to supervise machinery in shops, but to practical work in the art of all science, most difficult and responsible for its every day application deals with the interests and lives of human beings. You will be subjected to and harassed by the physical strains incident to incomplete knowledge and incapacity to deal with the material side of your profession. In spite of the

utmost and sincerest efforts and the most incessant study of your profession, the realization of your ignorance will grow with your experience. And your soul will be made sick by the revelations of human weakness and iniquity you must receive and bury in silence, and will be wearied by the burdens of responsibility which will be thrust upon you, and which you must bear without comfort from any human source, for you may not violate any confidence reposed in you—the physician.

Truly your labor has just begun. You must sort and re-sort and pick over again from the chips and junk you have accumulated, and therewith build and build better than has yet been done. You will

have to secure new materials also. Very much of the old literature of medicine, very many of the dogmas of the old authorities must die out of the memory of the profession—in fact should never have had a place in it.

To become great in the medical profession requires the exercise of the highest intellectual powers, analytical and synthetical; the staunchest moral principles and courage, and indefatigable labor.

Whether or not the words, "Accipe Hoc," introduces to yourself and the world a new blessing or another disaster, will depend entirely upon a factor hitherto ignored, henceforth of the greatest importance—the personal equation.

ABSTRACTS.

ADMINISTRATION OF NITROUS OXIDE PRELIMINARY TO ETHER ANÆSTHESIA.

M. H. Rogers, Physician and Pathologist to the Bristol England Hospital for Sick Children and Women, writes (*Bristol Med-chir. Jour.*)

As long ago as 1876, Clover described how before ether anæsthesia it was advisable to administer nitrous oxide; so that were it not for the neglect of this valuable suggestion, I should feel that an apology was required for bringing up such a hackneyed question. All the unpleasant sensations experienced during the early stages of ether anæsthesia may be avoided by giving a small quantity of nitrous oxide first.

First of all, I wish to express my regret that chloroform is still so largely used, when we have a far safer and an equally satisfactory anesthetic in ether. As far as I can judge, the causes for its almost universal use—certainly in country practice—are, that its administration requires no expensive, more or less complicated apparatus, and that its use is far more economical. But when we bear in mind the not inconsiderable risk attendant on all cases of chloroform anæsthesia, I am convinced that its use should be restricted to those cases in which ether for some particular reason, is to be discarded.

There must be, in all cases of anæsthesia sufficiently profound for surgical operations, a certain amount of risk; but we may always feel when administering ether that when once sufficiently deep narcosis has been produced, timely warning will be given of any dangerous condition; whereas with chloroform, patients not infrequently pass to a more or less dangerous stage with great and unexpected suddenness. Whether or not we hold, with the Hyderabad Commission, that cardiac failure in chloroform anæsthesia is only secondary to respiratory failure matters little in comparing the relative safety of ether and chloroform, for there appears to be no serious risk of either when ether is given.

Without wishing to raise the whole question of the choice of anesthetics, the best methods of administering them, and their relative safety or danger, I must say I believe that a large number of the fatalities from anesthetics are due to inexperience, or perhaps primary want of knowledge, on the part of the anesthetist; or want of attention during the operation to the patient's condition. Experience should be gained during the time of student life, and should not, as is the usual custom,

be postponed till the qualifications to practice are obtained. Plenty of opportunities are given at the hospitals attached to medical schools for students to learn how to give anesthetics, but they are much too often neglected for the superior attractions of the operation. Theoretical knowledge of administration, though not so useful, is of no mean value; but few of our medical schools include a course of instruction in anesthetics in their syllabus, and I have never heard of a question on the subject being asked in any examination. The anesthetist should be wholly engaged in giving the anesthetic, and should pay no more attention to the operation and doings of the surgeon than to see that his patient is sufficiently under to render the operation possible without movement or pain.

Now to the point to which I wish specially to call attention. Those who have had the misfortune to have taken ether will know that the inhalation of the vapour is not altogether pleasing. The odor is pungent, and the taste burning and most unpleasant; and it is impossible, even when given by the most skilled hands, to avoid these disagreeable sensations. When, however, nitrous oxide is given in the manner I shall presently mention, all this unpleasantness is lost; further, there is neither struggling nor cough; in fact, the patient passes from the far from unpleasant sensations of nitrous oxide anesthesia to ether narcosis quite insensibly and quietly. I have had nitrous oxide administered to me more than once, and can assure those who have never experienced it that, beyond a peculiar sweet taste and a tendency to take deeper respirations than usual, the sensation is on the whole pleasurable. In administering gas before ether, only sufficient of the former anesthetic is given to render the patient partially insensible—only till the sensation of lightness of the head is induced; and though I am not prepared to say that any anesthesia of the air passages is produced, practical experience teaches that after a few—six or eight—respirations the irritating effect of the ether on the mucous membrane of the respiratory tract is not observed. On the last occasion on which I took nitrous oxide I attempted to count the number of respirations I took before I became insensible, and on recovery found I only re-

membered taking twelve. No doubt I should have felt the pain of the tooth extraction if it had taken place then; but this shows how soon loss of consciousness comes on.

The apparatus I use is Hewitt's modification of Clover's ether inhaler: others are in use, but I find this answers its purpose well, and I shall continue to use it till one evidently superior is introduced. The gas-bag, previously filled with nitrous oxide, is fitted on to the dome which has been warmed and supplied with ether. All the fittings of the apparatus should be so accurately made that there is no leakage of gas or ether; so that when the gas is turned on no taste of ether vapor is noticed. The valves are so arranged that respiration of air alone is allowed at first, by which the patient gets accustomed to the face-piece and can be induced to breathe properly—a thing often not done at first—and the anesthetist can hear that the valves are working properly. After a few respirations the gas is turned on, and is drawn from the bag to the patient's lungs and expired through the valves. About six respirations in this way are permitted, when the valve arrangement is turned off, so that respirations now pass from and to the bag, and at the same time a small turn is given to the ether dome. In a short time signs of slight nitrous oxide narcosis are noticed, but should not be allowed to proceed too far. There should not be much lividity, but should it become marked, a single breath of air causes it to disappear. Meanwhile the ether has been turned on till now it is nearly at full, and in a short time the patient is ready. The great difficulty to avoid is, allowing the patient to come round between the gas and ether narcosis—a thing very easily done if too much air is admitted. Only experience can teach the anesthetist how much, and when air should be given. Deep nitrous oxide anesthesia is not desired or required. It will be found that two gallons of gas is about the amount required; but each patient has a personal equation both for nitrous oxide and for ether, and the anesthetist has to find it out by careful and cautious observation. I believe by this method of administration after-vomiting is less frequent. But much, too, depends on keeping the patient equably under the anesthetic at the time of the operation. There should be deep anes-

thesia at first, especially if the operation is on a sensitive part, but much lighter anesthesia is sufficient subsequently; but it must be maintained equably, or as equably as is possible.

To those who have no experience of this

method, I can confidently recommend it as by far the simplest, both for the patient and the administrator; and if comfort is concerned, I can unhesitatingly say that it is the best yet devised.

SOCIETY REPORTS.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. ABSTRACTS OF SOME PAPERS READ.

PRESENT STATUS OF THE SANITARY MOVEMENT FOR THE ADOPTION OF THE INDIVIDUAL COMMUNION CUP.

Dr. H. S. Anders, Philadelphia.

Attention is directed to the established facts and principles of hygiene which underlie the sanitary argument in favor of the abolition of the common and the substitution of the individual communion cup. Ministers and Biblical scholars of broad and progressive views are rapidly recognizing the disease dangers of the ordinary cup as passed to communicants in turn, among any one of whom incipient or hidden communicable disease may contaminate the mouth secretion and thus be passed to many who are innocent and in good health to jeopardize them. The individual communion cup is presented as the only sanitary, reliable, practicable and practical solution of this problem of danger to the public health in a Christian community. There are no valid scriptural, historical or ecclesiastical objections to the change, according to the majority of protestant denominational authorities.

The individual communion cup has been in use with perfect satisfaction and success, sanitary and reverential, for one year, since its use first by the North Baptist Church of Rochester, New York. Twenty churches, including some of the Methodist Episcopal and Presbyterian denominations, in that city have adopted, or voted for the innovation. The congregations number from 500 to 2,000 communicants.

The distribution of communion wine by individual cups is rendered more expeditious and harmonious, and is no less spiritually impressive.

Four churches in Philadelphia have made the change, the Fourth Baptist, the Bethlehem Presbyterian, the Eighteenth Street Methodist Episcopal and the Heidelberg Reformed. The movement is receiving favorable and intelligent, calm and general consideration in numerous churches throughout the land. New York, Pennsylvania, New Hampshire, Massachusetts, Georgia, Virginia, Ohio, Illinois, Missouri, California, have all to my knowledge received the good seeds of the sanitary reform in proper spirit, and the fruitage is becoming evident in large measure.

ADDRESS IN HYGIENE.

Hildegard H. Longsdorf, M. D., of Carlisle.

The science of hygiene is under a great onward impulse through the discoveries and researches in bacteriology. The theories based upon these researches have seemed to make the health problem an easy one to solve, but in spite of these tangible results the retrospect and outlook are not re-assuring.

Many questions on sanitary lines remain unsettled; there is a growing fear that the race product is on a lower average than formerly, and that the vigor and manhood which constitute the real wealth of the nation is declining.

The causes for this must be looked for in the increase of the "dissolute and effective" classes, and the want of restraint upon their disease-developing power.

Hygiene in its ultimate meaning is *race development*, and from this standpoint it must be considered among the many

humanitarian and sociological questions that perplex the thinker and threaten the integrity of the body politic.

If prevention is the keynote of the medical thought of the day, it is the height of wisdom to pay heed to the sources of moral contamination. Overcrowding in cities, child-labor, unnatural and unremitting toil by the mothers, are some of the most potential of these causes, and they appeal to the hygienist and to the legislator on the basis of race deterioration and loss to the State.

The absolutely dissolute should be isolated and their labor made productive; first, to prevent the transmission of their pernicious qualities; secondly, to relieve the State of the burden of their maintenance in asylums and reformatories.

MENTAL INFLUENCE IN THE TREATMENT OF DISEASE.

Theodore Diller, M.D., of Pittsburg.

The paper was a plea for the study of mental influences which detrimentally or beneficially influence persons. Attention was called to the fact that little or no effort was taken to protect the public from organized movements like faith-healing, christian science, etc., which exert baneful psychical influence over large numbers.

Physicians can do much to correct evils arising from the influences of christian science, etc., by studying and recognizing the kernel of truth contained in each, using it, and showing, when necessity arises, the evil which proceeds from the ignorant and unauthorized use.

The quack and charlatan effect many of their so-called "cures" by first creating or greatly magnifying in the minds of their victims the disease they essay to cure.

In each individual case of any kind, it should be the effort of the physician to remove all baneful mental influences which may surround the patient and create about him a healthful mental atmosphere. Intelligent and kindly consideration, with confident suggestions within careful limits, can generally do all that hypnotic sleep can do, and without the suspicion and mysticism which attaches to the latter.

Above all it is essential to him who uses these mental influences for thera-

peutic purposes, to be honorable and to possess in himself a character from which shall radiate healthful mental suggestions.

NECESSITY FOR THE ADVERTISEMENT AND ISOLATION OF CERTAIN CONTAGIOUS AND INFECTIOUS DISEASES.

F. LeMoyné, M.D., of Pittsburg.

The object of this paper was to call attention to the importance of advertising and isolating cases of contagious and infectious diseases, particularly of scarlatina and diphtheria. Such affections are conspicuous causes of suffering and mortality, and by proper precautions they are to a great extent preventable.

Existing laws in this State commit the strange inconsistency of exacting precautions and enforcing restrictions in regard to small-pox, which is to a great extent under control by vaccination, while scarlatina and diphtheria, to which a much larger proportion of the population are susceptible, have every opportunity for dissemination and are not subject to proper legal regulations.

The members of the medical profession are the natural and acknowledged guardians of the health of the people and it is incumbent upon them to lead the public mind safely in that direction by emphasizing the fact that every case of scarlatina or diphtheria not carefully isolated and plainly placarded is a shameful menace to the surrounding population.

REPORT OF A SERIES OF CASES OF LARYNGEAL DIPHTHERIA TREATED BY ANTITOXIN, WITH AND WITHOUT INTUBATION.

Edwin Rosenthal, M.D., of Philadelphia.

After brief mention of the historical discoveries in bacteriology leading to the latest method of treatment, he gave a summary of his work. He divided the cases into two groups; one upon whom the operation of intubation was performed, and the other where the operation was not a necessity.

Those cases, ten in number, treated without intubation recovered.

Of those cases, twelve in number, treated with intubation, two died and ten re-

covered; a mortality of sixteen per cent. Combined statistics, before the advent of antitoxin, in cases treated by intubation showed a mortality of seventy-two per cent.—that is twenty-eight recoveries in a hundred. Dr. Rosenthal's own statistics, in a former paper, showed a mortality of sixty-two per cent.—38 recoveries in a hundred. In juxtaposition to this the combined statistics of antitoxin treatment have shown a marvelous reduction in the death rates.

Dr. Rosenthal's work was done mostly with Behring's antitoxin, though he has used Aronson's, Gibier's and McFarland's antitoxin. Almost all his cases recovering, makes their value equal; the German antitoxin, however, brought quicker reaction than the domestic, and for that reason was superior.

Dr. Rosenthal's conclusions are:—Antitoxin is a specific in diphtheria. In early cases, those seen in one or two days after injection, no death rate should be recorded.

In laryngeal diphtheria, the so-called membranous croup, antitoxin is especially indicated. It should be used in every stage or at any date of the disease no matter how late we see the case; its influence can be proven, for cases of laryngeal diphtheria perish from suffocation long before any toxic symptoms could be manifested; for that reason he strongly urges the necessity of prompt intubation when indicated, even if before the injection of the antitoxin. Regarding the use of antitoxin:—Do not delay or hesitate in this disease because the case is not so bad, or because it might get well without it; but use it at once—the earlier its use the more certain its success.

RATIONAL TREATMENT OF FRACTURE OF THE FEMUR NEAR THE HIP-JOINT IN AGED PERSONS

E. V. Swing, M.D., Coatesville, Pa.

The paper recites briefly the history of eighteen cases of what is commonly called "intra-capsular" fracture of femur, and advocates, in all cases of fracture near the hip-joint, in aged persons (seventy and upwards), rest in bed on a good mattress without extension or counter-extension, as giving the best promise of life and the most comfort while living.

A CLINICAL CONTRIBUTION TO THE STUDY OF THE RELATION OF CONVERGENCE TO ACCOMMODATION.

Howard F. Hansell, M.D., of Philadelphia.

Read by title.

Report of a case of divergent strabismus of many years standing in which binocular fixation was possible only at the expense of clearness of distant vision. Each eye was nearly emmetropic and had no organic defect, and either could be used in fixation. There was no assignable cause for the anomaly.

The interest in the case lies in the transient power of binocular fixation accomplished only by conscious effort and with the simultaneous contraction of the ciliary muscle by which myopia of 3.5 D. was invariably acquired to disappear immediately when the divergence of the optic axes was restored. The association of the function of accommodation with that of convergence where the primary stimulus is directed to the interni instead of to the ciliary muscle, is thus demonstrated, just as reversely normal contraction of the accommodation induces normal convergence, and pathological contraction pathological convergence; instances of which are exceedingly common and indisputable.

RECENT EXPERIENCE IN THE ELECTRICAL TREATMENT OF FIBROID TUMORS AND CATARRHAL AFFECTIONS OF THE UTERINE TRACT.

G. Betton Massey, M.D., of Philadelphia.

In the treatment of two classes of fibroid tumors there is no conflict between the claims of electricity and the knife. There are cases in which electricity in expert hands can give a hundred per cent. of practical cures; not necessarily cosmetic cures, but completely satisfactory in the comfort and well-being of the patient. There are also cases in which electricity can only do harm, and in which ablative surgery is not only wise but imperative.

In a third class true conflict occurs, and I may specify this class as made up of large tumors causing much deformity, and which by reason of their situation or constitution require prolonged efforts for electrical absorption. If the deformity is great it becomes a question for the patient

to decide whether the dangers of an operation should not be faced. Operations are too frequently performed on small tumors in which a complete and permanent cure can be assured from the electrical treatment. Hemorrhagic tumors of all sizes should be placed under this treatment; the author claims never to have had a failure in curing the hemorrhage and pain and in reducing the size. Of non-hemorrhagic large tumors reduction or disappearance is most certain in instances of symmetrically developed interstitial growths.

The class in which electricity is not indicated embraces degenerating tumors in which malignancy may be suspected, and

all tumors associated with purulent inflammations of the appendages.

One of the most important services of electro-therapeutics to gynecology is the prevention and cure of tubo-ovarian disease. This affection is dependent upon a uterine catarrh; hence the cure of an endometritis is in many cases the prevention of the former. The positive pole is indicated within the uterus and the negative pole within the vagina at different applications. A large number of young girls have thus been restored to full womanly health, in spite of the fact that some of them had been advised to submit to an unsexing operation.

THE TENNESSEE STATE MEDICAL SOCIETY.

April, 1895.

Dr. J. H. Warmuth, M.D., Smyrna, read a paper entitled

DIFFERENTIAL DIAGNOSIS BETWEEN ROSEOLA, MEASLES, RÖTHELN AND SCARLET FEVER.

(See page 803.)

J. S. Nowlin, M.D., Shelbyville, read a paper entitled

DIFFERENTIAL DIAGNOSIS IN THE ERUPTIVE FEVERS, AND SOME THOUGHTS ON ENDEMIC AND EPIDEMIC INFLUENCE.

(See page 806.)

DISCUSSION.

DR. N. G. TUCKER, Nashville: In these exanthematous affections we should exercise great care in making a diagnosis. My experience in the last three years, as Health Officer of Nashville, has led me to believe our physicians are exceedingly careless in this respect. No doubt there is great similarity in these affections, but they have a natural history, which, if properly studied and properly understood, and if we took the care we should take in making a diagnosis, would prevent so many mistakes in diagnosis and treatment. I may mention a case in point. Only a few years ago, a case of small-pox occurred in

Hot Springs, Arkansas. A diagnosis was not made until the patient was dead, transported across the country, and other cases developed from it. I believe it is claimed about 175 cases have occurred in Hot Springs, and there are probably twenty-five or thirty localities in this country of ours affected by the disease. It has come into our own State. Several cases have occurred in Covington. If proper care had been used in the first case, it might have been controlled at once. No doubt some of these cases have been pronounced rōtheln or German measles. It is true that we have not been entirely clear of it here in ten years. I don't know how many years before that since there was a time when the city was free from it. It has not prevailed the entire year, but sometime during the year a case would pop up. A case called rōtheln, chicken pox, or something of that kind, would prove to be a case of scarlet fever. And I will say to the profession and to the people of Nashville, so long as this is true the disease will simply have to wear itself out; it will continue from day to day for the Lord knows how long. Physicians should study these infections. They have their periods of incubation and their periods of eruption; everything is as marked as a crop of corn or of oats, and if you give

more attention, there will be less trouble in the care of these cases.

DR. J. M. COYLE, Nashville: How would you make your diagnosis of scarlet fever in the negro before desquamation?

DR. TUCKER: The eruption will occur in twenty-four hours from the beginning of the attack; in measles, seventy-two hours; and in small-pox seventy-two hours. Among the negroes, where it rarely occurs, the rash appears in twenty-four hours.

DR. COYLE: In the negro the eruption often cannot be discovered. They are not white; they are black, yellow; they are all colors. In the black race scarlet fever may occur and the eruption not be discovered because it may not show itself plain enough for us to see it. We may guess at it but I don't see how we can arrive at a positive diagnosis. And it is from this source the great number of cases are carried to Nashville. I have investigated a number of cases of scarlet fever in the negro, and until desquamation occurs there is little ability to diagnose it.

DR. J. B. NEIL, Nashville: Did you ever see a case of scarlet fever without sore throat?

DR. COYLE: No, but I have seen many other conditions with sore throat.

DR. W. F. GLENN, Nashville: A thought as to how cases become epidemic. Take what the doctors themselves do. We have our office hour, and before the office time we go out, wearing perhaps a woolly overcoat, to see one patient where there may be scarlet fever, and, without even washing our hands, from there we go to another place to treat children, and thus make a number of calls before returning to our office. Let the gentlemen who treat scarlet fever, attend scarlet fever cases only; where the patients can pay the charge, let them pay it, and where they cannot let the city pay the expenses. I am sure I have carried scarlet fever, and I am sure other physicians in this city have carried scarlet fever, to their sorrow.

DR. W. A. H. COOP, Nashville: The diagnosis of scarlet fever in the early stages is not always possible. For instance, a woman attended the birth of a child in a neighborhood apart from where I was then practicing, and returning home she developed a violent sore throat. I considered it only a very bad case of tonsillitis. I

made no effort at isolation. What was the consequence? The entire family became affected; the disease lasted from midwinter to July or August, and many infants died from it.

DR. J. B. COWAN, Tullahoma: The question of scarlet fever is especially interesting. Probably, of all the exanthemata, we have no disease so contagious as scarlet fever; and no other disease where the contagion will remain in the room so long. It has been said you have had scarlet fever in Nashville for ten years. Have your rooms been thoroughly disinfected? And have you observed the rules for stamping out that poison in your rooms? What method have you used in doing it? I have known scarlet fever to occur when there was not another case in the city, in a room where there had been scarlet fever seven years before. That room had been repainted and repapered. I have known it, in other cases, to occur after two or three years. I have known erysipelas to occur after two years.

Nashville is not the cleanest place in the world by a good deal. I doubt if you have accomplished much in this respect, and so I think you have the germs here now. Somebody said something about the ignorance of the people in the country letting it come to the city. Why, we have never had an epidemic, and we have had only five invasions in the town I came from, and these came from Nashville; were sent there by the doctors. Every single case was sent from the city of Nashville. Ignorance does not allow it to come only from the country into Nashville, you see. When we undertake to stamp out scarlet fever, we usually accomplish a good deal by the patient dying and being put in the ground; but then we should go to the house and burn everything we can—I don't know whether boiling will do or not. (Question: Burn the house?) I suppose that would be a good idea.

As to the different diagnosis. I believe you can differentiate between measles and scarlet fever, and small-pox and scarlet fever. But I wish to say that I have never seen an epidemic of diphtheria or of scarlet fever but I have found cases which I do not believe anybody, even with a microscope, could differentiate. I have seen cases in the same family which I could not, and I do not believe any man could, differentiate.

DR. HOLSTON: In 1888 I moved into a house, and fifteen days thereafter my children were taken down with scarlet fever. I had moved to the country. I had not been anywhere, and they had not been anywhere to come in contact with it. My first case was an attack of scarlet fever sore throat. The next, a little girl, had quite a high temperature and then an eruption. About three years previous a child had died in the same house of what was called membranous croup. In the last year, 1894, there were six cases of scarlet fever in the same house. These occurred after a family had come in and repapered and fixed the house. I believe it would be necessary to burn everything and destroy the house. We have had scarlet fever here for seven years. One family moved out of this house and another moved in, and I do not believe we have disinfected it. After a case of scarlet fever is over, the doctor leaves the card up, and an officer goes to the room and disinfects it. I am satisfied the case that occurred in the house I referred to, which was reported to be membranous croup, was scarlet fever. As Dr. Tucker, who, of course, was called in, will know, the first two cases appeared to be diphtheria, but four of the children had scarlatina. We put up a diphtheria card. I believe the germs were there for six years.

DR. BRADLEY: I would like Dr. Glenn to explain the position he takes regarding physicians scattering this disease. I am satisfied we all do that. I am satisfied I did, and then I know I lied like a puppy to my patrons when I said I had not and that it was conveyed through the air. But Dr. Glenn, I believe, takes the position that there should be two or three physicians in every city to attend to these cases of contagious disease. I would like Dr. Glenn to explain to us how we may know whether we have a case of scarlet fever if we do not make at least one call. Suppose he has a dozen cases to see tomorrow in the city. He calls and sees one, and turns it over to another doctor, and then goes on to see his other eleven cases. The next day he will probably find another case to turn over to the other doctor. In the country there is only one physician within five or six miles, and you will get a "right nice cussing" if you call a neighboring physician to treat a case of scarlet fever. I am opposed to

scattering the disease. I have not half enough clothes to change every time I see a case, but I, for one, will wear a different suit while treating these cases.

DR. G. A. BAXTOR, Chattanooga: I dislike to hear or to feel that we have no power over these epidemic forms of disease. For one, I am thoroughly convinced of our power of choking them out of existence, provided we can once know them sufficiently to get our fingers on their throats. It is the letting up too soon; it is the failure to watch the patient until desquamation is complete; the failure to personally disinfect the patient after desquamation is complete; not the two or three days before a certain diagnosis can be made that permits the spread of these diseases. Oftentimes it is due to letting the patient out of the room with the clothing on, and then disinfecting the room when the ram has jumped the fence and the flock has followed and you cannot stop them. We have to control them from the first, and throughout, and constantly, and not leave it to the Health Officer or anybody else. That part of the work belongs to us as much as treating the child for the safety of the child's life.

I know scarlet fever cannot always be diagnosticated. Certainly there are many cases which cannot be diagnosticated at all at first, but none of us see a case of sore throat, especially during an epidemic, without scarlet fever occurring to our mind, and diphtheria and tonsillitis, and three or four of those things, and we are on our guard until our diagnosis is absolutely complete.

The idea to me is a repugnant one, that infection cannot be destroyed in a house. I know to the contrary. Boiling, at 212° F. will kill any germ in the world, if the boiling is continued long enough. Again, we have germicides that need not be mentioned. If you properly close the room and properly sulphur it, you have absolute safety. I would as soon take my children into a room a week after a case of scarlet fever, if I can go over the room, as I would after any other septic trouble. Boiling for half an hour will kill any germ. If you wash the paint and walls, if necessary, with corrosive sublimate, and sulphur it properly while the walls are damp, you will render it safe. But if you do not do that, infection may remain, not only one year but a dozen.

DR. ROBERTS: There are two features in connection with scarlet fever that to a certain extent cause both practitioners and people to be somewhat negligent. So many cases occur that are very mild; and people are loathe to take heroic preventive measures. As to the measures spoken of by Dr. Cowan, the objection is, that so often we see one case in a family with three, half a dozen, or more children all housed up together for twenty or twenty-five days, and not another case develops. How often does that occur! At least half a dozen times in my experience during the last winter. In a family of six, ranging from an infant at the breast to children thirteen or fourteen years of age, a typical case of scarlet fever occurred. The house was quarantined, and the family kept in the same room, even on the same bed; the case passed through all the stages; and yet not a single other case has occurred there, although that was in 1894. You cannot get the people to take heroic measures in these cases. Isolation is very different from thoroughly stamping out the infection. It will modify it and lessen it to some extent.

The vitality of the germ varies remarkably. Besides, it is so portable. In my country practice, I have seen an isolated case occurring with no other case for miles around. One case occurred in a newly built house, with no other case I knew of within ten miles, and the child had not been off the place for a long time. Some other member of the household must have brought it there. In the adjoining county of Sumner, I was called to see a family living in a new house. After some eight months' residence in the house, one of the children, some seventeen or eighteen years of age, contracted the disease. She was before apparently in good health and had not been off the place for a long time. I noticed a pair of shoes in the family, which were evidently new. I found they had obtained them from a certain store. I happened to have been in that store a short time before and asked the keeper how he was, and he replied, all very well except one child had scarlet fever. The result, I think, was the development of a case in a place at quite a distance.

DR. KELLY: I think the remarks concerning the stamping out of scarlet fever will scarcely be very generally accepted. Still, that none may be confused with the

idea that the germs of any of these diseases may be destroyed by fifteen or twenty minutes or half an hour or two hours' boiling, it is only necessary to refer to the experiments, which show the germs may be destroyed, but the spores will not be destroyed. This experiment can be tried by any of you at the office, and you will find after a few days the germs present again. Boiling does not destroy the spores, but does destroy the vital germs. The curious fact that some people can occupy a bed where a scarlet fever patient has died and will not contract the infection, is often a stumbling block to the stamping out of the disease. The people become careless. Why physicians do not carry the disease oftener than they do we cannot explain. The fact that it is transferred from one place to another is in favor of nothing, but the specific germ is heavy, and tends to sink on the carpet and clothing; the physician carries it only on the lower part of his clothing, gets into his buggy, and it gets in the rug and is carried about in that way. In my opinion, a bath and scrub and shave are altogether unnecessary, especially if the clothing, and particularly that of the lower part of the body, be changed.

DR. J. B. MURFREE: In my experience the contagiousness of scarlet fever is not greater than that of other infectious diseases. It is a fact that the area of infection is limited to within a few feet of the patient. It is less portable than the contagion of any other disease. It is susceptible of being destroyed by fumigation and disinfection. One case comes to my mind at this time. It was a well marked case of scarlet fever in a family of six young children, and a family where other children were coming and going. After the child recovered the room was disinfected, and there has not been a case of scarlet fever among the other children nor in the neighborhood. Another case. In the country a number of children were gathered together in a small room. The disease had been brought to the home, and a little child died in forty-eight hours, yet in that family there were three other children in the same room that the little girl died in, and not one had the disease. It is a question whether or not it is atmospheric borne. I have seen cases of scarlet fever, time and again, where I

could not trace it; and I have seen cases, with other children in the room, without the disease affecting these other children. The idea of scarlet fever remaining in the room ten years and then causing the disease is incredible. Why not consider it as a fresh infection? Surely the poison is not so virulent as the gentlemen would have it.

DR. T. H. MARABLE, Clarksville: I was impressed with Dr. Glenn's idea of conveying scarlet fever. I had never thought of it in that way. I have heard Professor Loomis, in lecturing upon scarlet fever, say that he carried his own child with him, had no hesitancy in going to see a case, coming out and getting in the vehicle with the child. I don't believe that I, nor any other physician, ever carried the contagion in the clothing. We had a marked epidemic of scarlet fever, according to the statement of the health officer, and it devolved upon me, while the health officer was away recuperating, to look after the epidemic. I found the most effectual means of spreading the disease was through the physician: not, however, by carrying the disease in his clothes, but by letting the people intermingle before the desquamation had passed off. I remember one case in which there was a very violent sore throat with only a small patch of eruption on the back of the hand. It was one of the first cases I saw at that time, and I didn't know it was scarlet fever until desquamation occurred, and the hands and the soles of the feet desquamated almost solidly. There was a very fine desquamation of the entire skin, but on the soles of the feet and the hands, desquamation was almost perfect. In that epidemic we had some cases with so very little sore throat that your attention would not be attracted to it. They were not kept in bed, and in a few days desquamation set in and they went through the regular course. I have seen cases there where the temperature did not go above 101°, 102° or 103°.

DR. J. S. NOWLIN, (Closing the discussion): The discussion was rather confined to scarlet fever. My paper was merely on the eruptive fevers, with remarks on epidemic and endemic influence. It seems to be a question whether it is an easy matter to make a differential diagnosis between scarlet fever and diphtheria, with-

out the aid of the microscope. Of course, general practitioners must be governed very largely by clinical features. The paper I read I thought set forth pretty clearly the distinctive symptoms between the two. You will notice, in scarlet fever, the fever runs up rapidly, becoming high quickly. As was said by Dr. Tucker, it is these symptoms which must be kept constantly in the diagnostic eye of the medical man. In scarlet fever the fever runs up rapidly. This is not true with the initiatory symptoms in diphtheria. Whether or not you find an eruption or ulceration upon the skin in scarlatina, you will always find a scarlet blush in the throat. I don't believe I have ever seen a case of scarlet fever in which I could not discover this. You can see the evidence of it in the throat, on the fauces and on the cheek. Diphtheria presents itself as a disease of the tonsils, sometimes involving the uvula and the surrounding tissue; but this symptom involves the whole surface visible when you open the mouth, although not marked in some instances. How often we hear it said that the strawberry tongue is peculiar to scarlet fever. As I understand it, in a strawberry tongue there is a white coat, through which the red papilla are seen protruding. As an almost universal rule it is a black coat. In diphtheria I never saw a white coated tongue.

DR. O. C. OMOHUNDRO, Nashville: This is the first subject before this Society at any time where there has not been a word said about treatment. The idea seemed to be to disinfect the room and give attention to the inmates of the house, but not the treatment of the patient. As to disinfection, I think that rooms can be thoroughly disinfected by using two ounces of sulphur to each hundred cubic feet in the room. One mistake with many gentlemen is that when they go into a sick room they remove all unnecessary objects and the whole paraphernalia of the room, which is already infected, and then, after the patient is convalescent, they disinfect the room. Now, I would suggest that we should move everything out of the room, not forgetting books because numerous instances of books having propagated the disease have been reported, and disinfect them thoroughly at the very first visit we make to the room. Then take charge of the patient, and let the treatment be on

general principles. For six weeks afterwards the patient should be confined to the room because we knew the infecting material is given off by the patient for six weeks. I think it should be taught that patients, before they go out, should be thoroughly washed with the carbolized oil. There should be a disinfecting fluid in the room, in which the physician can wash his hands. The disease is propagated by close proximity. I would especially impress you with the importance of treating the inmates of the house as suspects. Isolate the one infected, from the children in the house but treat the latter with disinfectant washes or gargles for the mouth, and, if any be in poor health, with con-

stitutional treatment. We must attribute to the condition of the patient the difference in the disease in different families. If we use disinfectants in the throat, it will render the poison less noxious. With this treatment, I have had very little of serious throat complications.

DR. TUCKER: There is an idea prevalent among the people, that there is a difference between scarlatina and scarlet fever, and as a consequence cases of scarlatina are regarded as trivial, of little danger, although it can, we know, cause scarlet fever in the most malignant form. If we could impress the people that these names are synonymous, it would help us much in caring for this condition.

MANAGEMENT OF TYPHOID FEVER.

Professor F. C. Shattuck of Boston, has for the past two years given to typhoid patients, who seem able to bear them, raw and very soft boiled eggs, custards, animal broths, strained gruels, ice-cream, junket, blanc-mange, and even scraped or very finely minced meat, in addition to their milk, watching the stools, of course, for the appearance of undigested food. He believes in giving as much and as wide a range of food as each individual patient can digest, and as will not prove irritating to the ulcerated intestine, with plenty of water internally to promote the elimination of soluble poisons. He does not regard with much favor the use of the so-called intestinal antiseptics, and prefers small doses of the salicylate or subgallate of bismuth, the astringent properties of these compounds being naturally taken into account in their administration. He often gives a preliminary dose of calomel, especially in cases seen early and without pronounced diarrhoea. He resorts to enemata of water every second day when there is constipation, and to morphia to mild narcotism where there is intestinal hemorrhage. He does not approve of controlling the fever by means of drugs, and only now and then gives an occasional antipyretic dose in cases in which the headache or pyrexia produces such discomfort as to warrant it. Phenacetin he believes to be the safest of these remedies.

He has used the Brand method in hospital practice, and of 236 cases treated expectantly and with cold spongings 23 died—a mortality of 10 per cent. For some years past the cold spongings have been made much more efficient in the Massachusetts Hospital by rolling up the rubber sheet placed immediately under the patient at the sides so as to form a trough. Water at 60° F. (15.6° C.) is used, sometimes water with a little ice in it to make up for the heat absorbed from the body. One attendant can use cold water in this way, while two are almost indispensable for the tub-bath, with affusion to the head and friction to the body. A temperature of 102.5° F. (39.2° C.) is regarded as an indication for cold water.—*Boston Medical and Surgical Journal*.

Prescriptions for Asthma.

Chloroform.....	dr. i
Æther.....	dr. iss
Syrup acacie.....	dr. i
Tr. cardamom Co.....	dr. i

M. Sig. A teaspoonful every half hour until relief is obtained.

Ammo. iodidi.....	dr. ij
Ext. grindelia rob. fl. d.....	ss
Tr. lobeliae.....	āā dr. i
" belladonnae.....	dr. i
Syrup pruni virg.....	dr. i
Aq. dist.....	

M. Sig. Teaspoonful three times a day.

—Med Review.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS.

Dr. Bache Emmet writes of

Injured Ureters in Abdominal Surgery.

The author had recently to deal with a ureter injured in the removal of a tumor and occasionally in the removal of a calculus it is necessary to open the ureter, usually by a longitudinal incision. When high in the ureter it is better to try to press it upward into the pelvis and extract through a lumbar incision or, if below the pelvic brim to push it into the bladder and remove it through that organ. When distant from these ends a stone may be safely removed by peritoneal incision. The following cases reported by other men are used as illustrations.

A boy eight years of age, suffered from hematuria with abdominal pain for sixteen months. Failing to make a satisfactory diagnosis an exploratory incision was made in the left linea semilunaris and a calculus found in the right ureter two inches from the bladder. The wound was closed and healed. Three weeks later an incision as for ligature of the common iliac artery was made and the stone extracted with forceps through a longitudinal incision. The ureter was stitched with fine silk; a drainage tube introduced to the bottom of the wound and the boy made a perfect recovery. Contrary to the opinion of others, the author thinks a stone may be safely removed by trans-peritoneal incision and the ureteral edges united by continuous suture and the peritoneum sutured over it, or a through and through ureteral incision may be made after the abdomen has been opened for any reason. This method has been twice reported. In one case the patient recovered; in the other the suturing was successful but the patient died of peritonitis. This illustrated a prominent obstacle to the use of this method. There is rarely an obstructed ureter without an infected kidney, and this is apt to infect the wound and cause peritonitis. The second case, reported by Fenger, is plainly extra-peritoneal—not trans-peritoneal.

When the trans-peritoneal method is used we should use chromicized gut or fine silk continuous or else Glover's stitch suture and then stitch the peritoneum over all, if necessary insuring coaptation by careful trimming of the ureteral edges.

Should a partial transverse incision be accidentally made during an operation a very slight cut may be closed by a stitch or two and covered by peritoneum, but if gaping much the transverse must be changed into a longitudinal cut, to prevent a stricture. To accomplish this two methods are employed: The cut may be doubled on itself and stitched or the ureter may be completely severed and an anastomosis formed, or the proximal end

may be implanted in the bladder. Two centimeters of ureter has been excised for stricture near the kidney and the end successfully implanted in the pelvis. Implanting the proximal end in the abdominal wound, the loin, rectum or intestine has usually been very unsatisfactory. Some operators favor implanting the proximal end in the bladder, but the author opposes this on various grounds, particularly if there has been much shortening, and thinks that obliteration by ligature might be preferable. Cushing succeeded by direct suture in one case, but more usually stenosis results.

Experiments made on dogs have shown that the ureter may be dilated and the normal proximal end be slipped into the dilated distal one and fixed there by one or two sutures as has been done by Kelly. The author was forced to dilate a normal distal end enough to receive a dilated proximal one. He then used three puckering sutures, fixed the ends in place with them, completed the closure by sutures at the margin of the slit, and the operation proved a complete success.

Dr. Alexander Hugh Ferguson discusses the

Operative Treatment of Vesico and Recto-vaginal Fistulae

and after describing various methods which have been in vogue, gives one which has been devised by himself.

The knife is entered an eighth of an inch from the margin of the fistula and a cut made parallel to this around the opening and extending to the vesical mucous membrane, care being taken not to injure the latter. The ring marked out is now carefully separated from the mucous membrane until it can be turned over, when the opening is closed by carefully suturing the fresh edges.

This being done other sutures are entered in the untouched tissue surrounding the part denuded, care being again taken to avoid piercing the vesical mucous membrane. Tightening these sutures forces the flap previously described into the bladder as a ridge, and this seems to insure success.

Other papers in this issue are Remarks on Etiology and Treatment of Pelvic Inflammation, by Dr. R. Stranbury Sutton; Emmet's Operation for Laceration of the Cervix Uteri, by Dr. J. Duncan Emmet; Vaginal Hysterectomy, etc., by Fernand Henroin; Abdominal Hysterectomy, etc., by J. T. Binkley; Sterilization of Catgut by Dr. Collis H. Johnston; The Relation of Chorea and Rheumatism in Children, by Dr. G. Wythe Cook; Abdominal Surgery in China, by Dr. Elizabeth Reifsnnyder; Fatal Postpartum Hemorrhage Eighteen Days After Labor, by Dr. E. L. Tompkins.

EDINBURG MEDICAL JOURNAL.

Dr. Alexander Bruce reports a case of

Rupture of an Aortic Aneurism into the Superior Vena Cava.

A stone mason, fifty-seven years of age, married, was seen complaining of dyspnoea, and appearing very cyanotic. For five or six years he had had a bad cough which became worse during the last few months. A few days before being seen by the writer he thought he caught cold, as his breathing was interfered with, but he was somewhat relieved by venesection. He had been a moderate drinker, and had a history of an old attack of syphilis. No history of an unusual exertion preceding this attack of dyspnoea. The skin of the face, neck, thorax and arms was cyanotic and oedematous, the abdomen and lower portions of the body normal. There was an elastic swelling above both clavicles, the external jugulars projected as purple cords, but without pulsation and could be emptied by pressure. Over the base of the heart auscultation showed a peculiar murmur. "This was continuous, somewhat like a venous bruit, very loud, having an almost musical swishing sound. The sound was most intense during ventricular systole, almost dying away during diastole."

The point of maximum intensity lay on the sternum at the level of the third costal cartilage. It was propagated toward the right, and it diminished suddenly at the left sternal border, except opposite the fifth cartilage where it could be well heard an inch to the left of the sternum. No albuminuria at first, but it developed later.

Postmortem examination showed an aortic aneurism about half the size of a man's fist extending from the valves to the origin of the innominate artery. It had pushed the superior vena cava backward and there were two ulcerations into it—one about one-quarter and the other about three-sixteenths of an inch in diameter. The large veins in the neighborhood were greatly dilated, and the trachea and bloodvessels were surrounded by a dense fibrous mass in which was found a node supposed to be a gumma.

The attending physicians had noticed that the point of greatest intensity of the murmur had suddenly risen from the third to the second cartilage. This was explained post-mortem by finding the two ulcers into the vena cava, the upper being of more recent formation.

BROOKLYN MEDICAL JOURNAL.

At the Brooklyn Surgical Society, a case was reported of injury to the posterior interosseous nerve in reducing a dislocation and fracture at the elbow. The subsequent paralysis disappeared without operation.

Tuberculosis of the head of the humerus was mentioned as a comparative rarity in adults, and a case was reported in which excision gave a useful arm. In children continuous extension is easily maintained by

slinging the wrist to the neck but results of course in ankylosis.

In the *Physician and Surgeon*. Dr. J. R. Dodge writes of

The Rectal Tube.

Two cases are recorded; in one of which a diagnosis of malignant stricture of the colon was made and could be confirmed in no other way until the autopsy. In the other case a man had intussusception of the colon and, positively refusing operation, was finally relieved by a forcible injection through a long rectal tube. The report is very interesting on account of the heroic treatment used.

Dr. C. H. Hughes gives a psychopathical apology for Cain's fratricide—inspired by Mark Twain's lament for Adam.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

Dr. Thomas Y. Aby writes of

Continued Fever.

The disease referred to seems to the author to be displacing the severe malarial fevers formerly seen in his neighborhood, and he gives the chief characteristics as follows: Males are much more frequently attacked than females, nursing infants never, and elderly men rarely if ever. Africans though rarely attacked have the disease severely and lasting for a long time when attacked; rich and poor suffer equally, and although formerly seen during the summer and fall months, it now appears throughout the year.

Personal observation led the writer to believe this disease due to faulty excretion of tissue waste (not to a specific germ) but recent post-mortem investigations by other men seem to show it to be an atypical typhoid.

The poison seems incapable of elimination through the skin, liver, kidneys, etc., and the duty seems to fall on the mucous membrane of the small intestine. The author's reason for holding this view being that while the liver, kidneys, etc., are acting normally, and there is usually no tenderness anywhere, the stools will be found with an unusual amount of mucus, indicating an engorgement and unusual secretion in the intestinal coat, and this he believes to be the means adopted for the excretion of the poison.

The course of a typical case is as follows: Usually after a varying period of malaise the patient goes to bed and is seen with a pulse beating between ninety and one hundred and twenty and not varying with the temperature; which is usually between 100° and 102° in the morning and slowly rising from one and one-half to three degrees toward night, the tongue is usually pale, clean, and moist in the morning and may get harsher toward night. The appetite is poor; but the other symptoms common to most fevers, flushed features and thirst are much less marked. There is apt to be some constipation, and the abdomen soft and flat except for some rigidity of one of the recti. Nausea, vomiting, and pain of any kind, even headache, and de-

lirium of any degree even with continuous high temperature are usually absent.

The author can recall no exception to the rule of absence of delirium. Without showing any effect from treatment this condition goes on for probably from ten to thirty days, and then begins slowly to abate. After disappearance of fever, recovery is rapid and as after yellow fever better health is usually enjoyed than before the sickness.

The absence of headache in a case of fever particularly if any tension of the recti could be discovered would suggest this fever, for there are no pathognomonic symptoms.

In regard to treatment—after making use of all the recognized remedies for similar conditions the author has learned to depend on opium—a teaspoonful of camphorated tincture or fifteen or twenty drops of laudanum

to an adult every six or eight hours by the rectum. In defence of his use of this drug the author states that he does not think that it stops secretion in these doses, but allays irritation and therefore may appear to do so. Other drugs may be used if symptoms calling for them seem prominent.

Where the patient cares for it butter milk seems the most satisfactory food, and is given to the extent of about a quart daily. If averse to butter-milk, soups, broth, beef essence, etc., may be used, but never solid food, nor, the author says, sweet milk. Lemonade, soda water, etc., are allowed as desired.

Food is given every three hours from 6 A.M. to 9 P.M., at which time the fever is usually at its height, and a tepid bath being given the patient is not again disturbed until morning.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

SURGERY.

Hypertrophy of the Mammary Glands.

The diffuse form of hypertrophy of the mammary gland is known to be extremely rare. According to Roger Williams, out of 2,422 cases of mammary neoplasms which were consecutively under treatment in four London hospitals during a period of from 16 to 21 years, only six cases of diffuse hypertrophy were seen. In this connection, then, a case just recorded in the *Journal of the American Medical Association* by Dr. J. B. Hamilton is of more than ordinary interest (*Med. Press*). The patient was thirty-two years of age, and had been married eighteen years when she came under treatment for enormous hypertrophy of the breasts. The right breast measured 30 inches in circumference at the nipple and the left 39. The right breast also measured 30 inches around the pedicle and the left 27. Again, from the nipple to the pedicle the right measured 14 inches and the left 13½. The patient was unable to walk without assistance owing to the great weight and bulk of the organs. The first step in the operation for the removal of the right breast was that of passing two long pins through the pedicle, and tying the pedicle tightly between the pins and the chest. The breast was then removed by cutting two flaps of skin from the tumor, reflecting them respectively upwards and downwards, and enucleating the glands; the vessels were secured without difficulty. The hemorrhage was considerable, but it was almost entirely from the blood remaining in the gland. After removal the gland was found to weigh 27½ pounds. The wound healed by the first intention, and the patient did well. About three weeks after the first operation the left breast was similarly removed, and

the combined weight of the two glands amounted to no less than 50 pounds. The patient made a good recovery after the second operation.

Dry Surgery in Germany.

The American practitioners and student of medicine who have been trained to look upon irrigation as essential to the aseptic handling of wounds in their after-treatment, are always quite astonished at the apparent disregard the German surgeon seems to have for this method of securing good results. While in Gottingen, I was present every day at the surgical polyclinic held daily by Professor Rosenbach, and I do not believe I saw a drop of water or other irrigation fluid used during the whole time. The patient is brought in, the dressing removed, the wound examined, squeezed lightly, oozing pus is wiped off and dressings, dry or wet as may be necessary, are reapplied. Even in the treatment of deep abscesses, or where neurotic processes are going on, irrigation is never resorted to, the surgeon seeming to have all faith in his drainage tubes, without resorting to the stream of bichloride water as used by our American surgeons. They probably get just as good results here in Germany as we do in the United States, but their methods of wound-handling are certainly not so cleanly as those used in the latter country.

Simple Treatment of Ganglion.

Duplay (quoted by *Lyon Medical*) describes a simple, safe, and invariably successful treatment for this troublesome affection. This consists in the injection of a few drops of iodine into the cyst. Such injections must, of course, be practised under antiseptic precautions, the needle being driven in

at the point where the cyst is most prominent, the skin having first been drawn aside so that a valvular opening is made. The cyst is not previously evacuated, but the iodine is driven directly in. A small antiseptic dressing is applied with a bandage. Cure is accomplished in five or six six days. Sometimes in large cysts a second injection is necessary.

The Influence of Fatigue on the Auditory Functions

The New York *Medical Journal* says that in order to study this question, the author made examinations of twenty-four bicyclers after they had ridden thirty-two miles in two hours and a quarter. Two of the men complained of subjective noises only, while in nearly all of them the perception of sounds by arial conduction was less marked than in the normal condition, and Rinne's experiment showed negative results. In the riders who were subjected to an examination with tuning-forks a slight diminution in the perception of loud sounds was ascertained. The only lesion noticed was a slight hyperemia of the drum membrane.

The competitors were again examined after a rest of from two to seven hours, and in six of them the auditory power was found to be the same; in two it was not so good, and in the sixteen others it was better, the arial perception having increased from a few centimetres to a meter and a half, and Rinne's experiments gave positive results. The men in whom the amelioration was the most marked, in whom, consequently, the hearing had undergone the greatest change, were those who had had little experience or training.

Physical fatigue, says the writer, evidently causes a temporary weakening of the auditory power. This fact demonstrates, besides, he says, that the effects produced by great physical exercise are not shown by muscular fatigue only, but they remotely affect the entire organism and especially the nervous system, and the special senses, on account of the delicacy of their functions, are more likely to reveal the effects. The enervation shown by birds of passage after a long flight is a phenomenon of the same nature as that observed by the author in the examinations referred to.

The Treatment of Floating Kidney.

Riedel (Reineboth in *Cent. f. Chirurg.*) performed nephrorrhaphy in eight patients. As a result of this experience it was found that sutures made to include the renal structure and surrounding adipose tissue were insufficient for the purpose, and suture of the fibrous capsule alone by means of a catgut was subsequently substituted. This, however, only permits of fastening of the lower half of the organ, or that portion which projects below the twelfth rib, and fixation of the upper half must be accomplished by some other method. This is done by splitting the fibrous capsule for its entire length at the posterior edge of the kidney, loosening it from its attachments to the latter as far as

possible, and tamponing the space thus formed by means of a strip of iodoform gauze. The gauze is pushed as high up as possible between the exposed renal surface and the diaphragm. The remainder of the wound is allowed to remain for several weeks, and upon its removal two broad granulating surfaces are to be found lying opposite to each other. These become attached in the future progress of the healing, and the kidney thus becomes secured along its whole posterior border. The results thus far obtained are sufficiently encouraging to warrant further trial of the method.

The Differential Diagnosis of Infantile Scurvy.

Dr. J.H. Fruitnight (*Archives of Pediatrics*) summarizes our knowledge of scorbulus as follows:

It is the result of a faulty nutrition which leads to a deviation from the normal chemical composition of the blood, probably a deficiency of its alkalinity.

The disease is characterized by a blood dyscrasia accompanied by structural changes in the coats of the blood-vessel.

The bone and joint lesions, the spongy condition of the gums, and the petechiae constitute a triad of symptoms highly pathognomonic of the disease. One or both of the two last named symptoms may be lacking.

The order of development of the symptoms seems to be: First appear the tenderness and swellings of the lower extremity, then the sponginess of the gums, and finally the hemorrhagic extravasations.

Under the treatment these symptoms begin to improve in the same order of sequence, the epiphyseal lesions disappearing more rapidly than the other two.

If there be any doubt of the diagnosis of a given case, recourse should be had to the therapeutic test of an antiscorbutic regimen, which will by its results, in a comparatively short space of time determine the question beyond cavil.

The prognosis is nearly uniformly favorable under proper treatment, and the likelihood is that as physicians become more familiar with and competent in diagnosing the disease, its mortality will be reduced to nil.

The main principle involved in the treatment of infantile scurvy is comprised in the institution of antiscorbutic dietetic measures.

Loeffler's Solution for Topical Use in Diphtheria.

Methol.....	10 grains
Toluol.....	36 cubic cen
Absolute alcohol.....	60 cubic cen
Solution of ferric chlorid (U. S. F.).....	4 cubic cen

When much sepsis exists, two cc. of creolin or metacresol, are substituted for the ferric chlorid solution. We should prefer gualacol. The therapeutic value of this solution is attested by many competent observers. The application is quite painful, and cannot be born by the nose or larynx.

—Polyclinic.

The Use of Cocaine to Prevent Respiratory Disturbances During Chloroformization.

It is quite possible that others have been struck by the ease with which a patient whose tonsils and post-nasum have been penciled with a solution of cocaine previous to the use of chloroform takes the anesthetic. For some time I have practiced this use of cocaine in tonsillotomy and removal of adenoids after having noticed the comparative freedom from hemorrhage in a case where I attempted, but without success, to operate under cocaine alone, and had to give a general anesthetic. In this case the tonsils were removed with very little hemorrhage indeed, and I was able at once to remove the adenoids unhampered by hemorrhage from the tonsillar stumps. Apart altogether from the fact that cocaine thus used eases the subsequent use of chloroform (or ether), this circumstance of the freedom from hemorrhage in an operation (tonsillotomy), where such is always dreaded, ought to be freely observed. Before the action of the cocaine is over the patient is already conscious, and ice can be employed to prolong its effect. I should say that the cocaine, which need only be applied in weak solutions (two per cent.), reduces the loss of blood in the double operation of removal of tonsils and adenoids by over fifty per cent.

Rosenberg, of Berlin, has recently drawn attention to the fact that if the mucous membranes of the upper air-passages are anesthetized by cocaine before the administration of chloroform, the disturbances consequent upon their irritation are obviated. This author has found by experiments that at the beginning of anesthesia, if the blood pressure be considered as equal to 100, the systole is represented by 210, and the diastole by 40. Under normal conditions, on the contrary, the blood pressure being the same, the systole is represented by 110, and the diastole by 90. These modifications are due to respiratory disturbances consequent upon irritation by the chloroform of the mucous membranes of the upper air-passages. In two or three cases of my own where this combination of general and local anesthesia has been employed, less chloroform has apparently been used, and the patient went under with less struggling and fright, and more quickly. In strabismus operations cocaine furnishes a field free from hemorrhage, but as it abolishes sensation in the conjunctiva, it might prove embarrassing to the chloroformist.—*William Robertson, M.D., in British Medical Journal.*

Aristol in Oral Surgery.

In a comprehensive treatise on "Diseases and Surgery of the Mouth, Jaws, Teeth and Associated Parts" by Dr. James E. Garretson, which has been just issued from the press of J. B. Lippincott Company, the author speaks as follows of Aristol:—"This powder is to be highly recommended for its antiseptic and curative qualities. Advantage over Iodoform lies with absence of odor. Aristol is an amorphous powder of red-brown color. It is insoluble in cold water and glycerine. It

dissolves in chloroform, ether and benzine. Water heated to 140° F. dissolves it. It is also reasonably soluble in alcohol. Aristol is not toxic nor are there recorded any cases of ill results attendant on its use as a surgical dressing. Sifted over ulcers or used dusted upon the seat of a surgical operation its use proves most satisfactory. A salve made by rubbing it up with vaseline is highly recommended: of the prescriber proportions may vary at pleasure." In the chapter on epithelioma Dr. Garretson comments as follows on the use of Aristol: "The author has found much service in the free employment of chlorate of potassium in a finely pulverized form. This powder is furnished the patient and he is directed to apply it freely. Where the chlorate of potassium fails, trial of Aristol is recommended by Dr. Brocq, who claims to have secured by its employment most satisfactory results; the application is entirely painless; its use is restricted to ulcers of superficial character.

Local Application of Carbolic Acid.

Cerne, of Rouen, reports the two following cases in the *Normandie Medicale*: A diabetic male had an insignificant wound of the leg dressed with a compress wet with a weak carbolic acid solution; this produced gangrene which increased in size daily. The patient went to an empiric who replaced the carbolic acid by an ointment of some sort and the gangrene was arrested. The second case was that of an alcoholic, with sclerosis and perforating ulcer of the left great toe; this was dressed with a carbolic solution of 1 to 40; on the second morning all the end of the toe was gangrenous. These cases show the dangers which may result from the local application of carbolic acid, especially if made by the patient himself—that is to say, without precaution or measure. Caution should be exercised in the use of carbolic dressings; the danger is greater when, from any cause, the tissues have less than their normal vitality.

Treatment of Hydrocele.

A letter from France to the *Med. Press and Circular* says that the classical treatment of hydrocele, puncture and injection of tincture of iodine or some other irritating liquid, has been rendered much more simple by a surgeon who has published the result of several cases cured rapidly by the method. He inserts the trocar into the most dependent part of the tumor and removes the liquid; he then injects a five per cent. solution of carbolic acid, which is removed almost immediately. The trocar is introduced a second time into the canula, and pushing it up toward the highest point a counter-opening is made. The trocar is again withdrawn, and a drainage tube is passed through the canula and left in position, the canula being removed. The patient can immediately get up and walk about. The drain is withdrawn on the fourth day and in a week the man is cured.

Catheterization of the Ureters

Dr. Brown, in Johns Hopkins *Hospital Bulletin*, states that with Brenner's modification of Leiter's cystoscope he has found little or no difficulty in catheterizing the ureters in the male or female subject.

The bladder should contain from 150 to 200 c.cm. of fluid or even more. The writer then passes the anterior cystoscope and takes a complete survey of the bladder. This having been done he replaces it with the Brenner instrument which is passed with the stylet fixed.

The ureteral orifices are next searched for, and when these are found the stylet is removed and the catheter inserted and passed nearly to the inner opening of the canula. The ureteral orifice is again sought for and the catheter passed into it. To prevent kinking of the catheter and to guard against exerting undue traction upon the ureteral orifice the cystoscope must be kept in line with the catheter so long as the latter is within the ureter. Sometimes it has been found advantageous to give the catheter a slight curve at the tip. Nitze claims that the difficulty in catheterizing the male ureter is greatly lessened by passing through a special canal fixed to the cystoscope an elastic catheter, the end of which is made to take a direction when in the bladder corresponding to that taken by the lower extremity of the ureter as it passes through the vesical wall.—*N. A. Practitioner*.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM MAY 12, 1895, TO MAY 18, 1895.

Captain Charles Richard, Assistant Surgeon, will when relieved from duty at the Military Prison Fort Leavenworth, Kansas proceed to and take station at St. Louis, Missouri, for duty as Attending Surgeon, and Examiner of Recruits.

Captain Peter R. Egan, Assistant Surgeon, is relieved from duty at Fort Custer, Montana, and ordered to Fort Assiniboine, Montana for duty, relieving Major Charles B. Byrne, Assistant Surgeon. Mayor Byrne on being thus relieved is ordered to Fort Snelling, Minn. for duty.

Major William C. Shannon, Surgeon, upon the expiration of his present leave, is ordered to Fort Custer, for duty.

1st. Liet. Deane C. Howard, Assistant Surgeon, will be relieved from duty at Fort Snelling Minn. upon the arrival there of Major Charles B. Byrne Surgeon, and will then proceed to Fort Custer, Montana, and report for duty, at that post.

Captain Alonzo R. Chapin, Assistant Surgeon, having been found by an Army retiring board incapacitated for active service on account of disability incident to the service, is by direction of the President retired from active service this date May 10, 1895.

Leave of absence for four (4) months, to take effect on being relieved from duty at

Fort Thomas, Kentucky, is granted Captain William J. Wakeman, Assistant Surgeon, U. S. Army.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING MAY 15, 1895.

Wheeler, W., Assistant Surgeon; detailed as Chairman Board for Physical Examination of applicant for appointment in Revenue Cutter Service, May 13, 1895.

White, J. H., Passed Assistant Surgeon; detailed as Recorder Board for Physical Examination of applicant for appointment in Revenue Cutter Service, May 13, 1895.

Carrington, P. M., Passed Assistant Surgeon; granted leave of absence for fourteen days, May 4, 1895.

Cobb, J. O., Passed Assistant Surgeon; granted leave of absence for fourteen days, May 1, 1895.

NEWS AND MISCELLANY.

Deer Park on the Crest of the Alleghenies.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant, on the same mountain summit, is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One-way tickets, reading from St. Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice versa, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to recover the period of the holder's visit.

The season at these popular resorts commences June 23d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Md.

—4t. CHAS. O. SCULL,
General Passenger Agent
B. & O. R. R.